Transportation Library

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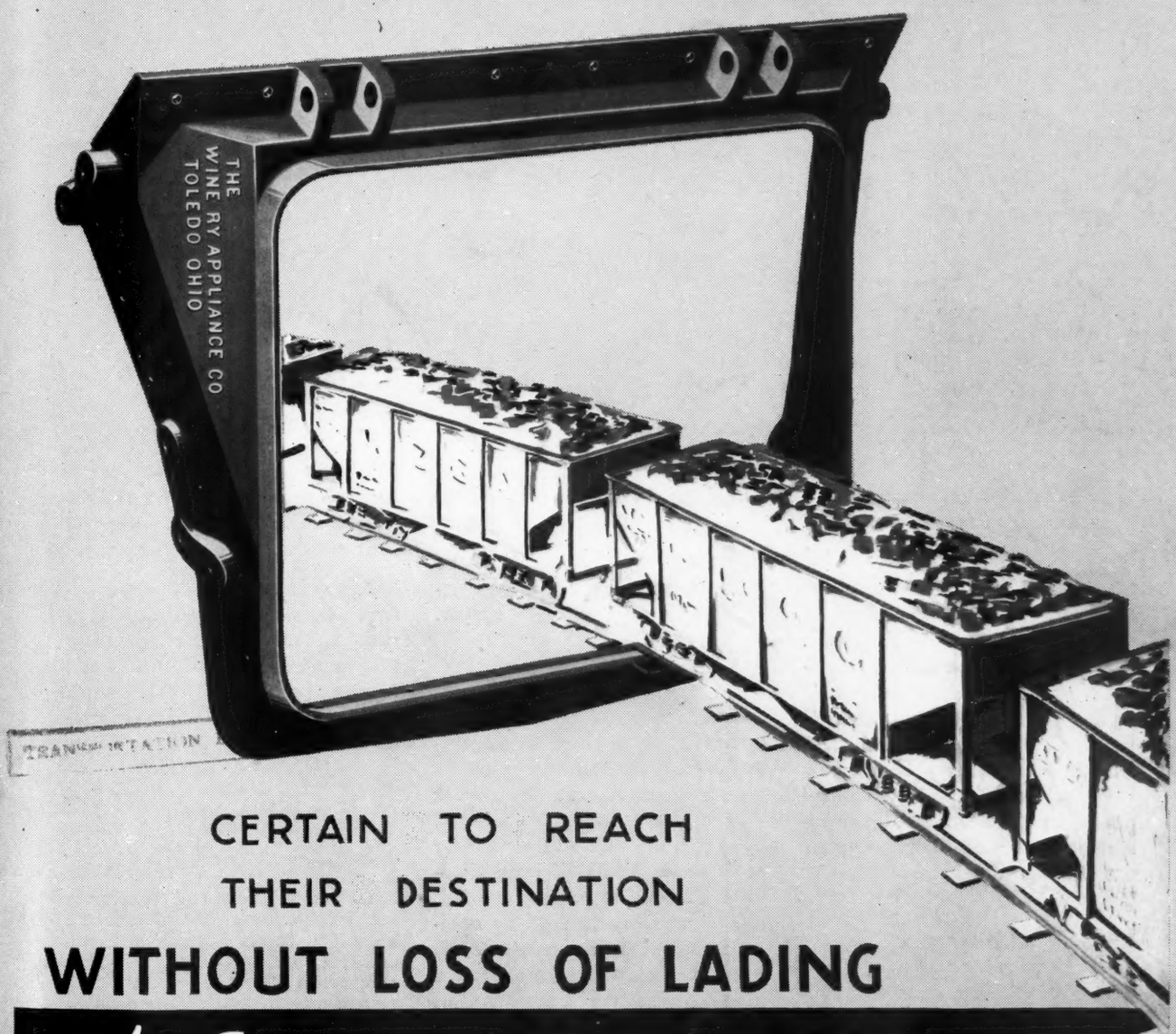

CERTAIN TO REACH
THEIR DESTINATION
WITHOUT LOSS OF LADING

Wine CAST STEEL
HOPPER FRAMES

The WINE RAILWAY APPLIANCE CO., TOLEDO, OHIO

RAILROADS last year paid 365 millions in taxes—a million dollars for every day in the year.

The important thing to you about these railroad taxes is that they are the same sort of taxes you pay on your home or your farm or business—by far the larger amount is paid to the states, counties and local communities. Every state and almost every county benefits by these payments, which go to support the activities of local government—and thereby help keep your taxes lower than they otherwise would be.

Railroad school-tax money, for example, pays for educating about 1,315,000 children every year. And that is only part of the story. Hundreds of counties depend primarily upon the railroads not only for the support of schools but for the maintenance of courts, law enforcement agencies and public services of all sorts.

So the ability of the railroads to make a living and pay taxes is important to every other taxpayer.

But there is also another side to the railroad tax story.

Because the larger part of railroad taxes is levied against tracks, stations and other facilities which the railroads provide and maintain at their own expense, these railroad taxes are not like those paid by most other forms of transportation. The major part of the fees and gasoline taxes paid by commercial trucks, for example, is spent for their direct benefit on the highways they use. But no part of what the railroads pay in taxes comes back to them to help keep up the tracks over which they operate.

Furthermore, railroads are actually taxed to provide and maintain the waterways and highways on which their competitors do business.

All these facts have a definite bearing upon the railroads' ability to make a living. They are something to figure into any program aimed to give the railroads a fair chance to meet other forms of transportation on equal terms.

★ ★ ★ ★

APRIL

"Perfect Shipping Month"

American shippers and consumers are saving millions of dollars a year because of better shipping and handling of goods, as a result of intelligent cooperative efforts by manufacturers, merchandisers and transportation agencies in the campaign for "Perfect Shipping and Careful Handling."

Let's all work—now—on still better shipping habits that will be profitable throughout the year.

Association of AMERICAN RAILROADS Washington, D. C.

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RAILWAY AGE

In Search of an Acceptable Policy on Competitive Rates

The distinguished authority on railway rates whose views on "out-of-pocket" and "cost" rate-making were presented in our issue of January 13, page 117, has written some further observations on this subject, as follows (his paragraphs being numbered to facilitate reference to them in the discussion):

Should "Costs" Include a Profit?

"I. The author of the article 'Out-of-pocket vs. Cost Rates' in the *Railway Age* of February 3 in defining full cost as 'only those costs which can be fairly assigned to a given movement' has a definition not materially different than we rate-makers have in mind in making low rates to secure volume traffic which could not otherwise be secured. In the next sentence, however, doubt of the author's intent develops from the statement that it should not include 'profit or any element of return on the investment'. This leaves the inference that it does include other expenses.

"II. We think also that it should not include taxes on investment, general costs or other expenses not directly dependent on volume handled. It should, however, include maintenance, depreciation and return on equipment required for its handling, plus something for those expenses which vary slightly with volume handled and, in addition, something (no matter how small) towards other expenses and return on investment, for there is no sound reason why any transportation agency should handle business merely for the privilege of swapping dollars. It would be better that an agency handle it which can make some money for investment, unless we are to assume that we should handle traffic solely with the objective of affording employment.

"III. In this sense I doubt if there is any appreciable tonnage handled by the railroads in this country which does not pay 'full' cost. Nor do I distinguish between the author's definition (in his mind) of 'out-of-pocket' basis and 'full' cost basis.

"IV. I do not understand why, other than in exceptional cases, he would exclude out-of-pocket basis in making rates to compete with other agencies of transport and permit it in other instances. If any agency must make out-of-pocket rates to keep an industry alive which no other transportation agency can (the lettuce traffic for instance) then is it not equally important that that same agency be permitted to make out-of-pocket rates to secure traffic that would otherwise move by a competing agency of transport if such traffic, when secured, adds something for those expenses which that industry cannot pay, but which must be paid by someone.

Rate-Making No Solution to R. R. Problem

"V. This whole discussion invariably brings us to the point that this transportation problem will not be solved constructively by rate-making. The whole discussion in this series of articles in the 'Age' deals with the question of makeshifts pending the solution of the major problems of:

"A. Whether in this country we shall have three or more types of transport, each fully self-sustaining and contributing relatively to support of government or whether we shall have three or more agencies of transport, all subsidized by the government; and

"B. Whether transportation laws shall be revised to promote those agencies of transport that most usefully serve the public instead of as at present, promoting fads and frills that enable some shippers to chisel on transport cost and dodge their share of the whole burden, while adding to the public burden.

"VI. You will never have a sound transportation system by basing railroad rates on 'full' cost on those commodities which can well afford to pay more but which will not pay more because they can utilize subsidized transportation agencies. There is not enough traffic which can and will pay 'full' cost, plus other expenses, including return on investment."

In paragraph I, our correspondent does not appear to distinguish between "missionary" rates, to create traffic which would not move at all without such concessions, and other "out-of-pocket" rates the purpose of which is to take existing business away from a competitor. It is true that, to an individual company, traffic taken away from a competitor may bear a close parallel to that secured by truly "missionary" rates. But, from the standpoint of the public interest, the two kinds of traffic are essentially dissimilar. And it is the public interest which must govern the regulatory authorities.

Low Rates to Build Traffic, or for Competition?

It is in the interest of the carriers and the producers, who are primarily interested, and often in the public interest also, including the consuming public that eventually pays the freight, to permit a carrier to make disproportionately low rates on traffic which would not move at all without such rates—because such rates leave the carrier, the producers and the consumers better off than they would be if these concessions were not made. There could conceivably be situations where such rates too generally applied might not be in the public interest, or in the best interest of the national transportation system as a whole; because indiscriminate establishment of rates on this theory might serve to destroy more

profitable traffic and create unhealthy competitive conditions. But a moderate use of such rates, wherever they make a net addition to transportation revenue and serve to strengthen a necessary line of transportation, are clearly justifiable. Other traffic (if that transported at low rates does not compete with it) does not suffer because such contribution to overhead expenses as this added traffic makes, relieves other traffic from a portion of the burden of overhead which it has to carry.

It is quite another matter, however, if a high-cost carrier is permitted to make disproportionately low rates to take business away from a more efficient competitor. Traffic gained in this manner may appear to the individual carrier exactly like business gained by "missionary" rates—but, from the standpoint of the public interest, disproportionately low competitive rates result in traffic moving by agencies which require an unnecessarily large outlay of labor and capital (thus diminishing the national income). Such waste is obviously contrary to the public interest. More than that, though, such low competitive rates give favored producers and consumers an unnecessary advantage (as proved by the fact that the business was already moving at higher rates). And on top of all that, such rates free the favored traffic of contributing toward overhead expenses and thereby increase the burden of overhead to be met by other traffic—without any showing that there is any justice in such a shift. Traffic which has demonstrated its ability to meet its full share of overhead expenses is freed of this obligation, and the burden is shifted to traffic which, perhaps, is already bearing all the overhead which it can stand.

Cost Formula Must Be Same for All Competitors

It would be a fine thing for the railroads if the legislative and regulatory authorities should decide that, the railroads being essential agencies of long-haul transportation, they should be permitted to make any rates they might see fit to capture traffic with which they would be better off with than without; whereas, their competitors, being selective agencies and non-essential for long-haul transportation, would be permitted to make rates competitive with the railroads only at "full costs" plus a profit. A sound argument could be made, in the public interest, for the adoption of such a policy. But the present situation must be faced realistically; there is nothing in the law which directs the regulatory authorities to make this distinction in favor of the railroads, even if they were so inclined—so if regulatory practices are to afford any protection to the railroads in holding traffic to which they are economically entitled, it will have to be by the acceptance of a principle which will apply to all regulated agencies of transportation alike. It is in the quest for such a statement of principle that this discussion was initiated by us.

Our correspondent is puzzled (as indicated in paragraphs I and II) by our doubts about including any element of profit in arriving at costs for the establishment of minimums for competitive rates. Our misgivings in this direction arise from the fear that, if profits are included in costs, they may be calculated in one manner for the railroads and quite differently for their competitors. When costs are calculated for establishing minimum competitive rates, it is essential that the elements of cost used be rigorously identical for all competitors. If, in computing motor carrier costs, taxes and a return on the value of the roadway used to provide motor transportation are not charged, then such charges should not be included in computing railway costs either. There probably would be little objection to including a profit in a calculation of costs for the establishment of minimum competitive rates, provided the profit were set as some uniform percentage of expenses. There is this to be said about this question of profits though—and that is that there is a certain hypocrisy implicit in a regulatory authority's using a theoretical calculation of what profit ought to be as a device to deny a carrier the right to participate in traffic, and hence prohibiting it from earning any profit at all.

With reference to our correspondent's difficulty (in his paragraph III) in understanding the distinction made herein between "out-of-pocket" and "full" costs —perhaps the point may be clarified by using the term "by-product rates" instead of "out-of-pocket rates." What we have in mind specifically are so-called "backhaul" rates made by trucks which cover only a fraction of the average costs of truck operation.

The theoretical (and not very accurate) view of the railroads as compared with the trucks in rate-making is that the railroads are preponderantly a "joint cost" business, with a large proportion of costs independent of any particular movement; whereas trucking is supposed to be a "direct cost" business, with very few costs which are inseparable from a given movement. But, actually, *as far as "back hauls" are concerned, the trucks are just as much a "joint cost" business as the railroads ever are.* A truck moves a load of high-class freight from a metropolitan point of origin to some manufacturing city 200 or 300 miles away. If it can pick up a load of carload freight to haul back at a rate which will yield anything above the *added* fuel cost (i. e., of a loaded vs. an empty truck) and the direct terminal cost of handling the particular traffic, the operator will be money in pocket. This is the kind of competition to which the railroads are subjected today —and which cannot very well be prevented if transportation competitors are going to be permitted to make "by product" rates in taking traffic from each other.

"Show Cause" Device for Meritorious Exceptions

We agree with our correspondent (paragraph V) that, since the railroads give an essential service and their rivals do not, the regulatory authorities would be justified in permitting to them greater latitude than to their rivals in making competitive rates on a basis below full costs. On the other hand, there appears to

be no immediate likelihood of such formal recognition being accorded as a matter of principle to the primacy of railroad service. Meantime, would not a "full cost" basis for minimum competitive rates serve the purpose, if it had a "show cause" clause appended to it? That is to say, competitive rates would be fixed at a minimum of "full cost," but with departures therefrom not precluded where a carrier could justify them under cross-examination to the satisfaction of the regulatory authorities.

In paragraphs V and VI our correspondent touches the heart of the malady of transportation, i. e., the inability of private capital which has to earn a return and pay taxes in competing with the recent and colossal government "investment" in transportation which yields neither taxes nor return. Of course, private enterprise cannot thrive under such conditions. On the other hand, whether private enterprise is again to have a chance depends upon public education. Could any educational device be more effective than that of bringing the question of comparative economy of the rival methods of transportation into every competitive rate case?

The Regulators' Three Alternatives

Be that as it may—the regulatory authorities are up against the immediate practical problem of developing principles which will enable them to adjudicate controversies which are inevitable when different agencies of transportation are in competition with each other; and they will reach their decision, probably, long before the public finally decides whether transportation is to be a public or private enterprise. There appear to be three alternatives open to the regulators, viz.:

1. Allowing all agencies to compete at a simple "out-of-pocket" or "by-product" minimum, which they will find by their own experience with little government intervention being necessary.

2. Holding rates sufficiently high so as to keep all

A Dog's Life for the Railroads

The motor carriers make it plain that they expect to take full advantage of such inertia as they are able to discover on the part of the railroads, and make that inertia put dollars in their pockets.

A further example of their purpose to lead the railroads a dog's life is their Fortieth Petition in Ex Parte M. C. 21, where they propose a rate on dog biscuits and other dog food which approximates only 12 cents per loaded truck-mile at 500 miles.

If the average Central territory truck could economically handle this traffic at 12 cents per running truck-mile and 4 cents per cwt. terminal (based upon their average empty to loaded movement), then the average truckload cost would be 18 cents per truck-mile. But their average cost, according to reports to the I. C. C. is 20 cents per truck-mile.

The proposed truck rate contemplates complete door-to-door service, including loading and unloading, ostensibly to meet the 40,000-lb. siding-to-siding rail rate which requires that the shipper perform the additional terminal service. Can there be any question as to who will get the business under these rate, minimum and handling comparisons?

The trucks have already earned their profit on their outbound haul of higher-rated goods and they can continue to "meet" railroad rates (with free loading and unloading, free c. and d. and lower minimums thrown in) on this back-haul truckload traffic so long as it nets them anything above their cost of terminal handling. This continuing downward rate trend, on carload traffic, regardless of true truck operating costs, can only result in all carriers handling a vast volume of total traffic at something slightly above their out-of-pocket costs.

The only sound answer is to stop indulging in this unsound practice. The existing trend does not conduce to transportation conditions compatible with the public interest, the defense of which is the function of the regulatory authorities.

An examination of the rate structure reveals that a great volume of the carload rates have already degenerated into out-of-pocket rates for one *or both* of the rival transportation agencies. And the trucks have the advantage in such practice, because their only added cost on back-haul traffic consists of relatively minor terminal costs.

We suggested in this space last week that the Commission should require common and contract motor carriers and railroads to *"show cause"* why any of their carrier competitive rates should be less than full cost of performing the service, and require all of them to increase such rates to full cost, unless strong reasons of public interest could demonstrate that an exception was justified. Has anyone a more likely solution to this dilemma?

If such procedure did no more than cause practically all traffic to bear some part of the transportation expense, it would at least result in all traffic bearing a more equitable part of the transportation burden than it does now; and produce greater total revenues for all carriers. Such procedure would not prevent traffic from moving and could not do other than declare a large part of the unsound operations out of the business and develop more traffic and revenues for sound and necessary operations.

If the present do-nothing policy continues, it can only result in less net revenue per unit of traffic and eventually, the necessity for general increase in all freight rates. And, if that happens, traffic will be hit which probably is already being destroyed by the present rate level. What is the sense of reducing rates on traffic which can bear present rates—with the probability that the burden thus created will have to be shifted to rates which cannot bear the burden?

the competitors—including the least efficient—in business.

3. Adopting some kind of "cost" basis of rates which will preserve to the economical agency its natural advantage, and discourage competition by high-cost agencies.

Of these three alternatives, the first is open to the objection that a very large part of total traffic is "back haul" or "by-product" to some transporter. If free rein is given to competition on this basis, quite likely half or more of the commerce of the country might move on a "by-product" basis—with obviously ruinous results to the whole transportation industry. It was, as Commissioner Eastman has frequently pointed out, primarily to put a stop to this kind of competition in transportation that regulation was adopted in the first place.

The second alternative—"umbrella rates" over high-cost producers—simply has the effect of keeping inefficient competitors in business, keeping costs to the public high; while efficient transporters do not necessarily prosper, because they have to share the business with the less efficient, and thereby lose in volume, perhaps, more than they gain in higher profit per unit.

The third alternative is difficult to state in precise terms, but, in general, it would fix minimum competitive rates by assigning costs of the competitors' service by exactly the same formula for all. Like the "out-of-pocket" basis, it would favor the efficient transporter —but, unlike it, it would hold competitive rates at a level which would bring in more adequate revenues to the successful competitor for the business. The efficient agency, at least, under this alternative, will have an opportunity to earn a living.

From a practical standpoint, our study indicates that "cost" rates based on the inclusion of all variables, but not return on investment, will give the railroads an advantage to which they are entitled in the public interest in competing for traffic, whereas the application of the "out-of-pocket" or "by-product" basis will give their competitors an advantage to which they are not entitled. Our correspondent questions whether there is any appreciable tonnage handled by the railroads which does not pay "full costs." We agree. On the other hand, there is a vast volume of tonnage handled by the railroads' water and truck competitors which falls far short of paying its average cost.

Two Miles of Travel—Free!

Most of us are familiar with the so-called "one-cent sales" wherein, if you buy one bag, box or bottle of some particular goods at a stated price you receive a second bag, box or bottle for only one penny extra. The railroads last year seem to have gone the one-cent sales idea one better, as, in effect, they presented each purchaser of passenger transportation with two miles of additional travel free.

According to current figures of the Interstate Commerce Commission, the average revenue per passenger (excluding the suburban riders) received by the railways in 1939 was $1.71. In 1938 the corresponding figure was exactly the same. But for his $1.71 in 1938 the average passenger traveled 82.7 miles, while for his $1.71 in 1939 he traveled 84.8 miles, a gain of 2.1 miles for the same money, or, in effect, two miles free. This situation resulted from the fact that the average revenue received per passenger per mile (again excluding commuters) fell from 2.07 cents in 1938 to 2.02 cents in 1939.

The average rail journey of the suburbanite continued to grow last year, his trips averaging 17.4 miles in each direction, the highest annual mark ever reached. The volume of suburban service performed by the railways in 1939 was equivalent to moving the entire population of the states of Delaware and Vermont—men, women and children—more than 17 miles every day in the year.

Airlines Invited to Maintain Airport

Declaring the "pioneering days" of flying are over, County Commissioner John J. Kane offered to turn the $6,000,000 Allegheny County Airport over to three major airlines if they would assume the cost of upkeep and the outstanding debt.

He said it was costing taxpayers $1,000 a day to subsidize the Pennsylvania Central, Transcontinental and Western and American Airlines, and added: "The pioneering days are over. The airlines are now making a profit—they must help themselves. I believe the taxpayers have subsidized the airport long enough. The airlines should pay their own way like the railroads and streetcar companies."

Mr. Kane charged the airlines had been "overcritical" of the county for not removing the heavy St. Valentine's Day snow, which caused an eight-day tie-up at the airport, and declared:

"We've no more right to use the taxpayers' money to clean the airport for you to use for private profit than we have to clean the tracks of the Pittsburgh Railways Company or the Pennsylvania Railroad."

C. Bedell Monro, president of the Pennsylvania Central, said, "We shall be very glad to consider the proposition" of taking over the airport, "but it will take a long study."

An Associated Press Dispatch from Pittsburgh, appearing in the Washington Evening Star.

S. 2009 Conferees Accept Senate's Study-Board Provision

WASHINGTON, D. C.

CONFEREES on S. 2009, the omnibus transportation bill, have agreed to embody in their conference report that provision of the Senate version which calls for appointment by the President of a board to investigate the relative economy of the various agencies of transportation and the extent to which each is being subsidized out of public funds. This agreement, reached at the March 19 meeting of the conference committee, was revealed by Chairman Wheeler of the Senate committee on interstate commerce, who also stated that the previously-entertained hope of concluding conferences at that session had not been realized.

When they began last Saturday to take up those "choice matters" which had been set aside—such as the through-routes provisions, forwarder regulation and the Harrington "labor-protection" amendment—the conferees were confident in their predictions that everything would be cleaned up at the March 19 session, after which a statement giving a general outline of what had been done would be forthcoming. It is understood, however, that much of that session was consumed in discussion of the question of including provisions for the regulation of forwarders; while considerable time was spent on the following day in an attempt to work out a compromise on the through-routes provisions. Forwarder regulation is understood to be favored generally by the House conferees who are also understood to be about as generally opposed to the through-routes provisions. Meanwhile the Senate conferees are believed to be supporting the through-routes provisions while adhering to their position that forwarder regulation should be deferred pending the outcome of the interstate commerce committee's forthcoming investigation of railroad methods of handling forwarder, l. c. l. and express traffic.

Chairman Wheeler revealed that the aforementioned provision for the investigating board was approved with some changes in the language of the Senate bill, but the set-up would be virtually the same as there contemplated. One of the changes makes the Presidential appointees to the board subject to confirmation by the Senate. The fact that the original provision did not call for such confirmation was among the things noted in I. C. C. Chairman Eastman's recent letter to the conferees.

On the matter of approving the House bill's provisions to afford relief for railroads with respect to the cost of rebuilding bridges required to be altered in connection with waterway improvements, the conferees are understood to be hesitant until they are assured that the President's attitude on that matter has changed since last year when he vetoed the separately-enacted bridge bill carrying similar provisions. Reports in conferee circles this week were to the effect that the President's attitude has not changed; and if such reports are confirmed it is quite likely that the provisions will be dropped.

Senator Wheeler left Washington on Wednesday evening, and no meeting of the conferees was scheduled for Thursday. They were scheduled to get together again on Friday morning, and expected to conclude their deliberations by the end of this week or early next week.

Meanwhile Representative Alexander, Republican of Minnesota, extending his remarks in the appendix to the March 14 issue of the Congressional Record, told how he understands "that the vital and essential amendments which the House approved and inserted last July when the bill was up before us are to be left out, or so changed and emasculated that the benefit will be lost to the public, for whose benefit they were inserted." Mr. Alexander went on to list the House amendments, referring first to the amendment to the declaration of policy which stipulates that "All of the provisions of this act shall be administered and enforced with a view to carrying out the above declaration of policy." There appears to be no opposition to this change; the railroads are understood to have no objection.

Next in turn Mr. Alexander listed the so-called Jones amendment which stipulates that the I. C. C. must require the railroads to establish export rates on agricultural products on the same relative basis that it permits the carriers to publish export rates on manufactured articles; the Miller-Wadsworth amendment which stipulates that the I. C. C. could not prevent a carrier from reducing a rate so long as the resultant charge remained compensatory after considering all elements of cost including overhead; and the above-mentioned Harrington "labor-protection" amendment. Mr. Alexander hopes the conferees "will incorporate these four amendments in any bill reported by the conference, and that all members of the Senate and the House from the valley states will insist upon this being done."

In the appendix to the March 19 issue of the Congressional Record, Representative Van Zandt, Republican of Pennsylvania, inserted a compilation of pronouncements from farm organizations which he said "very definitely place the farmer on record as supporting this important legislation." "It is important to observe," Mr. Van Zandt said, "that practically every farm group in the United States favors the regulation by the Interstate Commerce Commission of the inland waterways."

* * *

Photo Courtesy Canadian National

Dining Car Used on Canadian Troop Trains

The Car Is One of Six Accompanying Such Runs on the C. N. R. Between Montreal and Atlantic Ports. At One End Is a Butcher Shop and at the Other a Bake Shop. The Dining Car Staff of 14 Stands Behind the Counter Shown and Serves Food to Squads of Soldiers Who Carry It to Troop Cars in Special Containers.

Northern Pacific 50-Ton Hopper Car Built by American Car and Foundry Company

Lightweight Riveted Hopper Cars for the Northern Pacific

High ratio of revenue to gross load—75.8 per cent—made possible by special attention to design features affecting weight

AN order of 200 fifty-ton hopper cars, designed by the American Car and Foundry Company for the Northern Pacific, has recently been completed at the builder's Huntington, W. Va., plant and delivered to the railroad. In the design of these cars special attention was given to those factors affecting weight with the result that a car has been produced having a light weight of 41,000 lb.—a low weight figure for a hopper car of riveted construction and embracing the use of open-hearth carbon steel. While the car has a stenciled capacity of 100,000 lb., a load of 128,000 lb. can be handled without exceeding the capacity of the four 5½-in. by 10-in. axles. The revenue load is 75.8 per cent of the maximum load on the rails. The ratio of pay load to tare weight is 3.12 to 1.

These cars follow the conventional riveted hopper-car design except for body bolster design, and the fusion welded bolster center filler. The floor sheets, side sheets and other details in contact with the lading are of copper-bearing steel; riveting is generally employed to join the component parts of the car.

The center sills of this car consist of two A. A. R. Z-sections weighing 41.2 lb. per ft., welded together along the top center line. The special feature of the underframe is a fabricated construction at the bolster location. The use of steel castings for the bolster center filler has been replaced by the arrangement shown in the illustrations. The main members of the bolster center filler are two A. A. R. 36.2 lb. Z-sections, 24⅞ in. long placed in a reversed position, that is, with the heavy flanges at the top. These are welded along the flanged edges to the underside of the top flanges of the center-sill sections. The thin lower flanges pass under the heavy lower flanges of the center-sill sections to which they are secured by welding as well as by the rivets through the center plate and the lower flanges of the center sills. The rear draft-gear stop is a bar of USS Cor-Ten steel 1¼ in. by 3 in. by 12⅝ in. welded to the webs of the car center sills and to the web of the Z-shaped main member of the bolster center filler. A stiffener for the rear stop is

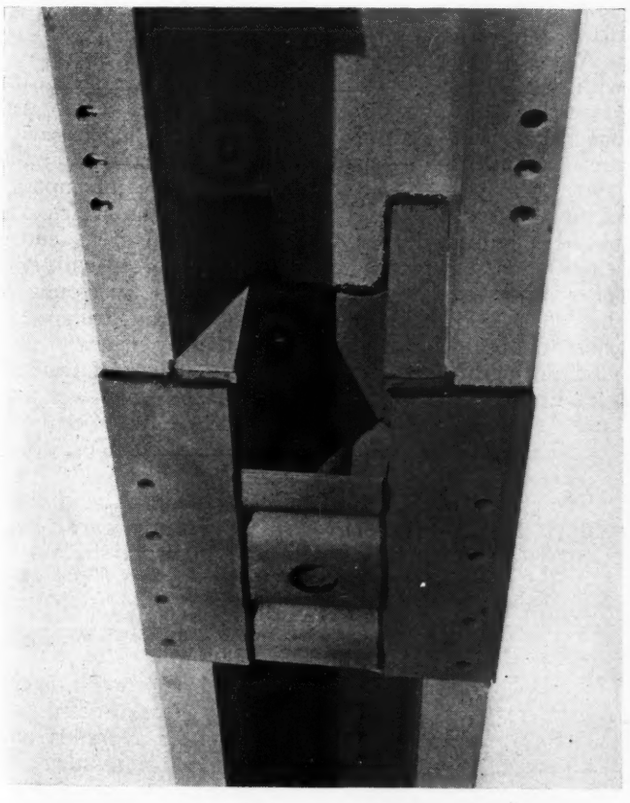
Principal Dimensions and Weights of Northern Pacific Hopper Cars

Length over strikers, ft.-in.	33-11¾
Length inside, ft.-in.	33- 0
Width inside, ft.-in.	10- 4
Width over-all, ft.-in.	10- 5
Height rail to top of side plate, ft.-in.	10- 5
Center to center of trucks, ft.-in.	24- 0
Truck wheel base, ft.-in.	5- 6
Capacity, lb.	100,000
Capacity, cu. ft.	2,081
Lightweight, lb.	41,000
Load limit, lb.	128,000
Ratio revenue to gross load, per cent	75.8
Ratio revenue to load to tare weight, per cent	3.12 to 1

welded to the vertical web of the draftgear main member and to the stop at the approximate neutral axis of the section.

The center-pin guide is formed of two ⅜-in. steel plates shaped at their inner ends to form a pocket for the center pin and welded at their outer ends, full depth, to the vertical web of the main member of the bolster center filler. Over the center plate, between the webs of the main members of the center filler, there is a ⅜-in. ribbed plate welded to the main members for stiffness. Pressed diagonal braces of 5/16-in. material are used between the bolster and the end corners of the car. The body bolster, between the top of the center sill and the bottom of the slope sheet consists of a 21-in. by 8¼-in. by 59-lb. I beam with the upper flange bent to fit against the 30-deg. slope of the slope sheet. The upper flange is riveted to the floor sheets and the lower flange is welded to the top of the center sill. The outer end of the body bolster is riveted to the side structure through 3½-in. by 3-in. by ⅜-in. angles. A 6-in. by 4-in. by ⅜-in. angle is riveted to the web of each center-sill section and to the lower flange of the bolster I beam. The inner ends of the diagonal brace are also riveted to this angle. The body bolster is further reinforced toward the center of the car by a ¼-in. flanged plate, welded to the vertical web of the body bolster and to the top of the center-sill sections. The top flanges of this plate are riveted to the slope sheets.

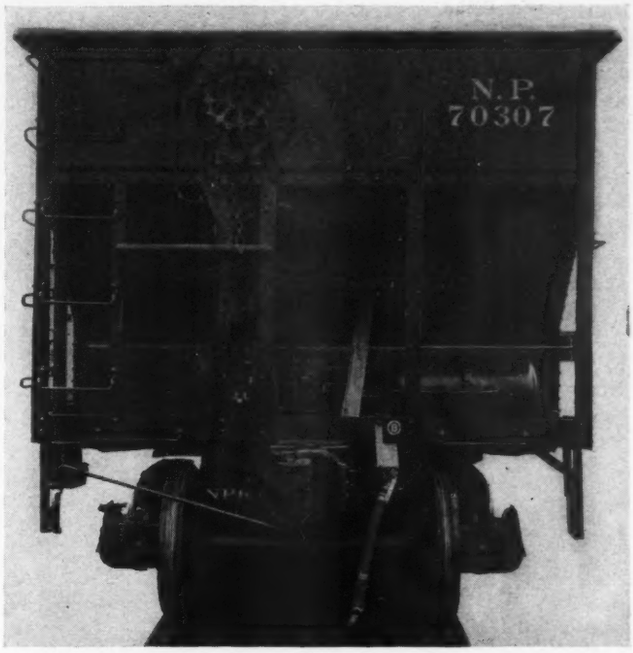
The body side bearing is made up of 7/16-in. plate, No. 11 gage shim and a ⅜-in. high carbon, heat treated wear plate supported by an 8-in. by 20.5-lb. I beam, the web of which is welded at the top to the bottom flange of the body bolster I beam and at the bottom to the 7/16-in. body side-bearing plate. The three plate members of the body side bearing are riveted to the horizontal flanges of two 3-in. by 3-in. by ¼-in. angles, the inside ends of which rest on the bottom flange of the center sill construction and are welded thereto. These angles serve as diagonals to stiffen the body side bearing construction.



A Section of the Center Sill at the Bolster Showing the Bolster Filler Construction

Body Construction

The side sills and end sills are 5-in. by 3½-in. by ⅜-in. angles running in one piece the full length of the car. The top, side, and end members consist of 5-in. by 3½-in. by 13.2-lb. bulb angles. The cross ridges are of ¼-in. plate with 3 1/16-in. 8.5-lb. Z-shaped bottom stiffeners and 3½-in. by 3½-in. by 5/16-in. side connection angles. The cross ridge and side-sheet braces are ¼-in. plate with 2½-in. by 3-in. by 6.1-lb. T-shaped stiffeners. The floor, or slope sheets, hoppers, car ends, and end side sheets are ¼-in. plate and the intermediate side sheets are 3/16-in. The floor sheets are flanged upward and riveted to the side sheets and are braced between the body bolster and end sill by 3½-in. by



The End of the Car—The I-Beam Bolster Above the Sills is Seen Under the Slope Sheet

3½-in. by 5/16-in. end angles. The side stakes are of the inside type pressed to U shape from 5/16-in. material. The car sides are sloped in at the top with outer side-stake fillers flush with the car sides. The hopper doors are flanged and pressed from 5/16-in. plate, are fitted to Enterprise hopper-door frames and equipped with Wine hopper-door fixtures.

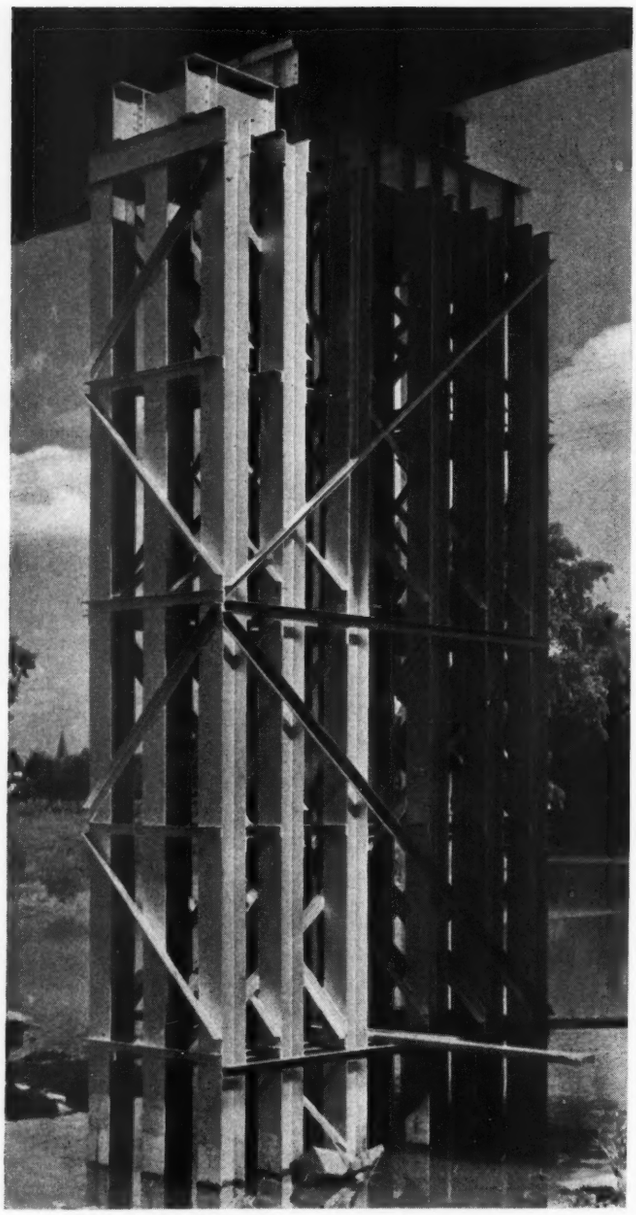
Trucks and Brake Equipment

The trucks used on these cars are the National Type B with the American Car and Foundry Company's chilled-iron single-plate wheels having treads ground after mounting on the axles. The trucks are constructed with cast-steel side frames having boxes cast integral, with cast-steel truck bolsters, Ajax brake beams, Schaefer brake-beam hangers, and Type E truck springs.

The cars are equipped with AB air-brake equipment furnished by Westinghouse and with Ajax hand brakes. The draft gear is the Edgewater friction type gear, with Buckeye Type E bottom-unlocking couplers, with cast-steel coupler yokes.

Bridge Piers of

First Introduced in new line construction several years ago, they are now being installed widely to replace obsolete masonry sub-structures



One of the Two Steel-Pile Piers That Were Installed at the Nith River Crossing to Replace Old Brick Masonry Piers

THE use of H-section steel bearing piles on the Central region of the Canadian National two years ago in the construction on a new line of bridge piers under extremely adverse conditions, involving piles ranging up to 210 ft. in length, proved so successful that steel-pile piers are now being employed extensively on this region in the replacement of existing masonry piers. Primarily responsible for this trend is the conviction that the H-pile pier is more economical than the conventional masonry structure, this being a particularly important consideration where the use of masonry piers would entail the construction of cofferdams.

Moreover, experience has shown that bridge piers of steel-pile construction may be built with relative rapidity and that, where used in the replacement of masonry piers that have been washed out or otherwise extensively damaged by high water, delays to traffic are reduced to a minimum. In fact, it is now a practice on the Central region to maintain a quantity of steel piles in stock so that they will be readily available for use in such emergencies.

Typical Details of Piers

In the steel piers that are being constructed on the Central region of the C. N. R., the H-piles not only act as bearing piles but also form the shaft of the pier. Generally speaking, the piers are rectangular in plan and are formed by transverse rows or bents of piles, the number of such bents and the number of piles in each of them being dependent on the loading and the foundation conditions. For its entire height above the water level, or above the ground as the case may be, each pier is thoroughly braced in both directions with steel angles placed both diagonally and horizontally.

At their upper ends, the piles in each pier are capped with steel channels, which are placed transversely with respect to the long dimension of the pier. One such channel is placed on each side of each row of piles, with the upper legs of the channels even with the tops of the piles. Bearing on these channels is a pier cap composed of two or more parallel wide-flange beams which are placed longitudinally on the pier and extend its entire length. The cap beams are liberally reinforced with stiffener angles and with steel diaphragms. Surmounting the cap at each bearing point is an I-beam grillage, in which the beams are formed into a unit by means of diaphragms and spacer bolts. The foregoing statements apply in a general way to most of the steel-pile piers that have been built to date, although there has been one notable exception as to the arrangement of the piles, which is described later in this article.

Practically all field connections involved in the fabrication of the piers are made by arc-welding, care being exercised to minimize the effects of internal stresses in the welds. Frequently it is necessary to splice the piles in the field to obtain units of adequate length and these connections, involving the use of splice plates, are generally also made by welding.

Steel piles were first introduced in bridge work on the Central region of the C. N. R. during the construction in 1937-38 of the 100-mile line between Noranda and Senneterre in Quebec, where on two occasions their use served to simplify greatly problems imposed by the presence of extremely unstable sub-soil conditions. One of

Structural Steel Piles Meet with Favor on the C.N.R.

the structures involved was a single-track bridge that was built to carry the new line across the Kinojevis river at a point about ten miles east of Noranda. In establishing the location of this structure, consideration was given to two different sites, one of which embodied suitable foundation conditions but offered serious disadvantages in the form of increased trackage, higher grades, excessive curvature and heavy approach work at the bridge site. The location of the bridge at this site would also have deprived two large mines of complete railroad service.

On the other hand, the alternative site, which was three miles north of the location described above, presented extremely difficult foundation problems but in other respects it constituted a more suitable location for the structure. In fact, it was felt that the advantages of this site far outweighed its disadvantages and it was decided to locate the bridge at this point.

The predominating characteristic of this crossing was that the river bed was composed, to a depth of about 80 ft., of a soft "soupy" clay that appeared to have scarcely any bearing power. Below this material there was approximately 50 ft. of stiffer clay and then about 50 ft. of quicksand overlying gravel. The east bank of the river was underlaid by a ledge of solid rock which, however, dropped away steeply and quickly disappeared altogether. The maximum depth of the river at the average water level was about 25 ft.

Before deciding on a type of structure for this location, careful consideration was given to various types of substructures to determine their suitability in the light of the severe subsoil conditions prevailing. This survey involved first an investigation of the possibilities of a conventional substructure design embodying concrete piers on pile foundations. However, in view of the considerable depth of the water and the even greater depth of the soft clay, necessitating the construction of cofferdams or caissons under extremely unfavorable conditions, it became apparent that the cost of such piers would be prohibitive. Indeed, the practicability of this type of construction under the conditions imposed was open to considerable doubt. Next an investigation was made of the possibilities of a form of construction involving piers built of H-section steel piles, and it was decided that this type of construction was not only practicable but that it offered considerable savings as compared with the cost of conventional masonry piers.

Type of Superstructure

Using second-hand steel spans, the structure that was chosen for the location embodied three through-truss spans, each 154 ft. 7 in. long center to center of main bearings, and a deck plate-girder span, 74 ft. 10 in. in over-all length, which was placed at the easterly end of the structure. The center truss span and the adjacent ends of the adjoining spans are supported on two steel-pile piers, while both abutments and the other pier are of reinforced concrete. As a means of reducing the length of the crossing, an approach fill of rock was constructed at the west end of the bridge and at this end the concrete abutment is supported on spread footings. The other abutment and the concrete pier rest directly on the rock ledge mentioned previously.

Each of the steel-pile piers is comprised of 48 piles of 12-in. by 12-in. 53-lb. section, which are arranged in four transverse rows of 12 piles each. Pier No. 2 (the more easterly of the two), in which the piles project about 30 ft. above the river bottom, embodies a cap and grillages similar in general to those described at the outset. The channels at the tops of the piles are of 15-in. 33.9-lb. section, while the cap is composed of three 36⅜-in. 182-lb. wide-flange beams. The grillage at each truss bearing point consists of five 18-in. I-beams. Since the Kinojevis river is used for logging operations, it was necessary to protect the pier against damage by floating

This Steel-Pile Pier at the Decew's Creek Bridge Was Installed to Replace a Failed Masonry Structure

The Substructure of the Lake Lemoine Narrows Bridge Includes Three Steel-Pile Piers

logs and to this end it was enclosed within a crib of interlocking steel sheet piling to a height slightly above the high-water level. To reinforce the sheet piling against lateral forces, it was braced with short lengths of the H-piles (cut-off sections) welded to the sheet piling and to the pier piles.

In the construction of Pier No. 1, in which the piles are considerably longer than in Pier No. 2, it was considered desirable to take additional measures for imparting stability to the pier. This pier, in which the piles extend about 25 ft. above the river bottom, was likewise enclosed to a height somewhat above the high-water level with a crib of steel sheet piling, which was then filled with concrete above the ground line, using a tremie. Above the top of the crib, the piles were enclosed in a concrete cap on which the bridge trusses are supported directly.

Test Pile 210 Ft. Long

As a part of the preliminary investigation work at the bridge site, a steel test pile was driven to refusal, requiring a pile 210 ft. in length. However, because the last 30 ft. of the test pile required about 100 blows per foot of penetration, using a 7,000-lb. steam hammer, it was considered unnecessary to drive the remaining piles to the same depth as the test pile. Those in pier No. 1 were driven to an average depth of about 175 ft. and those in Pier No. 2 to an average depth of approximately 145 ft. below the cut-off elevation, the piles in the latter pier being landed on the rock ledge.

The piles used at this location were furnished in 70-ft. lengths, and as an indication of the unstable character of the subsoil it is interesting to note that frequently the first sections of the piles penetrated for their full length into the river bottom under their own weight and without the help of any blows from the hammer. In fact, in some instances it was necessary to support the first section while the splice was being made, to keep it from sinking out of sight.

In the design of the pile piers, a comparatively low unit load (30 tons per pile) was used. Consideration was given to the question as to the depth that the piles would have to be driven before they would receive definite lateral support. In this connection it was realized that the slenderness ratio would have been high if the piles had been considered as being fixed only by the stiffer clay underlying the soupy material. However, in view of the well known consolidating effect of even the least stable soils around newly-driven piles, it was considered that the piles would be supported laterally for a considerable part of their height. Also, when the fact that the piles were to be fixed at the top was considered in the light of the foregoing consideration, it was reasoned that the slenderness ratio would be reduced to a conservative figure.

A Similar Situation

Another difficult bridge construction problem, involving subsoil conditions somewhat similar to those prevailing at the Kinojevis river, was encountered where the Noranda-Senneterre line crosses the Lake Lemoine narrows, and here also piers built of H-section piles were constructed to carry the main spans. This is a navigable stream in which the bottom is also composed of a soupy clay, although the depth of the latter (averaging 20 ft.) is considerably less than at the Kinojevis River site. At the Lake Lemoine narrows, soundings indicated the presence of solid rock at a reasonable depth on both sides of the stream, but here also the rock on both sides dropped away steeply within the limits of the stream and disappeared altogether.

Due to the greater width of the stream, the bridge at the Lake Lemoine narrows is considerably longer than that at the Kinojevis river and differs also to the extent that it embodies a swing span. The latter, which like the other steel in the bridge was second-hand, is of the through-truss "bob-tailed" type, in which the spans are 87 ft. 9 in. and 140 ft. 3 in. long, respectively. Both end rest piers of the swing span are of steel-pile construction, while the center pier is of reinforced concrete and is founded on the rock ledge on the west side of the stream, which at this point lies at a level approximately 50 ft. below the river bed. The depth of the water at the center pier is about 10 ft.

On the west the swing span is approached by a frame trestle 246 ft. long, in which the bents are founded on timber piles driven to rock. Immediately east of the swing span are two through plate-girder spans, each slightly more than 88 ft. long. The adjacent ends of these spans are carried on a steel-pile pier, while a timber-pile pier provides the support for the east end of the easterly span. From the east, the steel spans are approached by a timber trestle 411 ft. long, which is partly of standard pile construction and partly of frame construction supported on mud sills. For its entire length, this approach trestle is constructed on an earth fill, which also extends under the two plate-girder spans.

Except for variations in detail and in the number of piles per pier, the steel-pile piers in the Lake Lemoine Narrows bridge are essentially similar to Pier No. 2 in the Kinojevis River bridge, a further difference being

the fact that protective cribs of steel sheet piling were not provided for these piers. At the west end of the swing span, solid rock was found at a level 50 ft. below the ground, and the piles in the rest pier at this end were landed on this material, the average length of these piles being slightly less than 80 ft.

However, at the location of the two other steel-pile piers in this structure, the rock foundation was not accessible, and the piles in these piers were driven for a considerable distance into a blue clay underlying the soupy material. The maximum length of the piles in these piers is about 153 ft., although their average length is about 90 ft. In the pier at the east end of the swing span the piles have a height of about 33 ft. above the ground line, although in the other steel-pile pier the height of the pier was reduced to about 12 ft. by the fill at this end of the bridge.

Another Use for H-Piles

Because of the unstable character of the river bed material at this location, the task of constructing the pivot pier of the swing span constituted a difficult engineering problem. However, it was accomplished with entire satisfaction by using a cofferdam of unusual construction, embodying H-section piles, and involving an internal bracing system of ingenious design. This pier is circular in horizontal cross-section and is slightly less than 30 ft. in diameter. The plan of construction called for open excavation inside a circular cofferdam which would also serve as the form for the concrete.

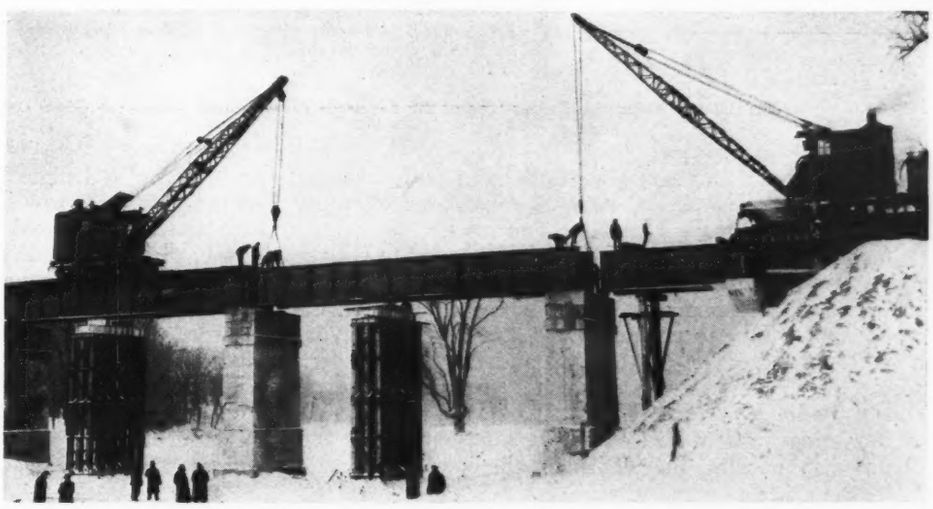
Close-Up View of Pier No. 2 in the Kinojevis River Bridge. The Sheet Piling Crib Protects the Pier Against Floating Logs

The cofferdam that was constructed for this purpose embodied two concentric rings of interlocking steel sheet piling, the inner ring having a diameter of 29 ft. 10⅛ in. and the outer ring a diameter of 32 ft. 2¾ in. Between the rings were inserted, in a vertical position and with the webs placed radially, a series of 12-in. H-piles, which were placed at alternate piles in the inner ring in such a manner as to give the maximum bearing power against both rings. To achieve this end the piles in the inner wall were driven with their webs outward, while those in the outside wall were placed with the webs inward, thus presenting flat surfaces on the interior between which the H-piles could be inserted. The inner wall of sheet piling in the cofferdam was cut off at the elevation of the lower edge of the coping on the pier, but the H-piles and the outer ring of piling were cut off at a level about 1 ft. above low water level. The height of this pier above the water level is about 20 ft.

Interior Bracing System

To strengthen the cofferdam against external pressure, an interior bracing system was devised, which consisted essentially of circular girders or collars of laminated timber construction, the outside diameter of which corresponded to that of the interior of the cofferdam. These girders, each of which was built in segments of the circle to facilitate handling, were 9⅜ in. by 1 ft. 11½ in. in cross-section and were reinforced on both the top and bottom sides with a 10-in. channel, pre-formed to the desired curvature. When the girders were in position in the cofferdam, they were separated by a number of 10-in. by 10-in. timber struts, the ends of which fitted into sockets formed by angles and plates bolted and welded to the channels on the girders.

There were four of the reinforcing girders and as the excavation proceeded they were lowered successively into the cofferdam, each ring carrying the timber struts by means of which it was separated from the next higher ring. To make allowance for the variation in the water head, the rings were so spaced as to provide the greatest protection near the bottom of the cofferdam. Thus, with the lower ring near the bottom of the cofferdam, the spacing between the successive rings was approximately 10 ft., 15 ft., and 25 ft., respectively, the upper ring being about 6 ft. below the water level. As the placing of the concrete proceeded, the rings were lifted pro-



View of the Operations Involved in Shifting the Steel Spans in the Nith River Bridge Into Position on the New Steel-Pile Piers and Concrete Abutments

gressively out of the cofferdam, utilizing for this purpose rods or cables that had been fastened to the rings before their insertion.

Steel-Pile Piers at Nith River

A noteworthy example of the use of steel-pile piers to replace existing substructures that have reached the end of their service life was afforded in the renewal of the piers and abutments of a bridge across the Nith river near New Hamburg, Ont. Originally, this structure consisted of four deck plate-girder spans, each 64 ft. long between the end bearings. The substructure, which was built about 1860, was comprised of three piers and two abutments of brick-masonry construction, the piers being about 30 ft. high above the footings. Disintegration of the lime mortar in the old piers had taken place to such an extent that it was decided to replace them with steel-pile piers.

In this work, which was carried out in 1938, the bridge was reduced to three spans, utilizing the old steel, which were arranged in a staggered position relative to the old arrangement. Thus, each of the new steel-pile piers was constructed midway between two of the old brick piers, and the new abutments, which are of reinforced concrete, were each located midway between the existing abutment and the adjacent brick pier. Each of the steel-pile piers at this location embodies 18 H-piles, arranged in three transverse bents of six piles each. The piles have an average length of 60 ft. and project about 35 ft. above the ground line.

In another instance, involving a two-span through-truss bridge at South River, Ont., the masonry pier was replaced with a steel-pile pier, which was constructed at a point 13 ft. from the old pier and the existing steel spans were shifted longitudinally. At the same time the old masonry abutments were replaced with concrete structures, that at one end being founded on rock while the other was supported on H-section piles.

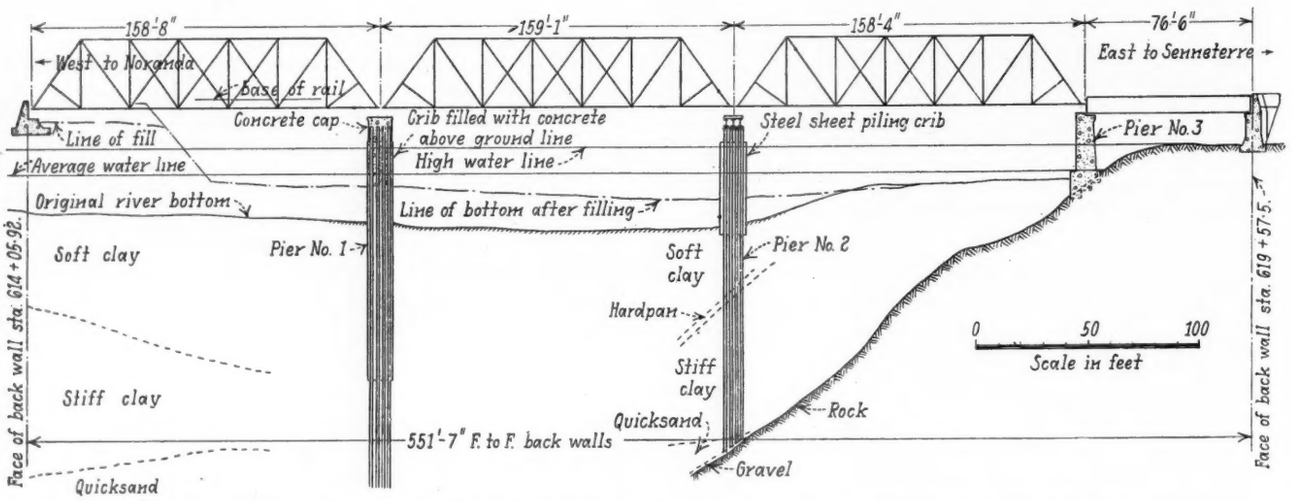
A third example of the use of steel-pile piers to replace existing masonry structures is provided by a project involving a bridge across Decew's creek near Northwood, Ont. This is a double-track structure embodying a 70-ft. through plate-girder span and two 28.5-ft. deck plate-girder spans, both of which were placed at one end of the longer structure. Originally, the substructure of this bridge was comprised of stone-masonry piers and abutments, but when the pier under the ends of the main

The Kinojevis River Bridge Embodies Two Steel-Pile Piers, One of Which (In Foreground) Has a Concrete Cap

span and of the adjacent approach span failed it was replaced with a steel-pile pier.

With the ends of the adjacent spans being supported on falsework, the new pier was constructed in the location of the old masonry unit. The pier that was constructed for this location differs from the typical design to the extent that, instead of being arranged in a rectangle, the piles were so placed as to give the greatest bearing power under the girders. Specifically, the pier is comprised of a single transverse row of 16 uniformly-spaced piles, the intermediate units of which receive the load from the girders in the adjacent approach span, and an additional row of four piles at each end (under the main girders).

In this pier the grillage under the web of each main girder, consisting of four transverse 24-in. I-beams, rests directly on the cap channels on the tops of the piles. The ends of the girders in the approach span are supported on a bed plate laid directly on the cap channels on the transverse row of piles. This pier is about 10 ft. high above the ground level, and the piles have a penetration of approximately 25 ft.



This Section Along the Center Line of the Kinojevis River Bridge Shows the Great Depth of the Steel-Pile Piers

An example of the installation of steel-pile piers to replace masonry structures washed out by high water was afforded in the case of the bridge across the Portneuf river at Portneuf, Ont. The original structure at this point embodied a deck plate-girder span 74 ft. 10 in. long, which was flanked at each end by a 50-ft. deck plate-girder span. The substructure, consisting of two piers and two abutments, was of concrete construction.

In September, 1938, the east abutment and pier were washed out completely, leaving only the westerly girder span in position. In the reconstruction of the bridge, the latter 50-ft. span was allowed to remain in position, the two spans that had been washed out were salvaged and re-erected in new positions, and another deck plate-girder span, 57 ft. 7 in. long, was added to the structure, thus considerably augmenting the waterway area.

The substructure for the reconstructed portion of the bridge consists of a new concrete abutment carried on H-piles, and two piers of steel-pile construction. In each of these piers, the piles are arranged in three rows of seven piles each. The average penetration of the piles is about 20 ft., while the height of the piers above the ground is about 21 ft. in one case and 15 ft. in the other. A feature of these piers is the cut-water that was provided at the upstream end of each of them as a protection against ice and other floating objects. In each case the cut-water is comprised of interlocking steel sheet piling driven to form an angle pointing upstream, at the apex of which is placed a steel H-pile.

We are indebted for the information contained in this article to C. P. Disney, bridge engineer of the Central region of the C. N. R.

Pullman, Inc.

THE annual report of Pullman, Inc., for 1939 shows a consolidated net income of $4,009,475 as compared with $2,295,829 in 1938. Of this, $2,630,298 came from its sleeping car business as compared with $2,504,266 in 1938; $418,348 from its manufacturing business as compared with $239,933 in 1938; and $1,684,098 from investments as compared with $862,922 in 1938. The net working capital at the end of the year amounted to $70,639,811, as compared with $64,171,322 at the end of 1938. Current assets as of December 31 were $85,708,521 and current liabilities $15,068,709.

In the report to stockholders, D. A. Crawford, president, said, "Pullman participated to some extent in the general expansion of domestic travel in 1939. Worthwhile earnings improvement in the business of the operating subsidiary depends primarily upon a substantial increase in traffic volume, which is dependent in turn upon sustained recovery of public purchasing power and upon adoption of concerted and effective rate and other promotional measures by all parties concerned with the operation and financial results of the first-class rail-Pullman passenger service. In the last analysis, however, the price tag is the most important single factor, and placement of first-class fares on a more favorable basis with relation to competitive services would provide effective stimulus for an advance in Pullman travel volume.

"With industrial production and carloadings staging one of the swiftest upturns on record, the railroads placed substantial freight car orders during the last four months of 1939, a satisfactory proportion of which was booked by the corporation's manufacturing subsidiary. Ten consecutive annual reductions in the average number of freight cars on the lines of Class I railroads have occurred since 1929, resulting in a total shrinkage of nearly 600,000 units. The number of cars required to handle a given volume of traffic has been reduced by the installation of larger capacity cars, acceleration of freight schedules, and generally improved operating efficiency of the railroads, but the increase in productivity per car affords only partial offset to the decline in total ownership, and further recovery of carloadings toward pre-depression levels would necessitate large scale additions to the present stock of freight equipment.

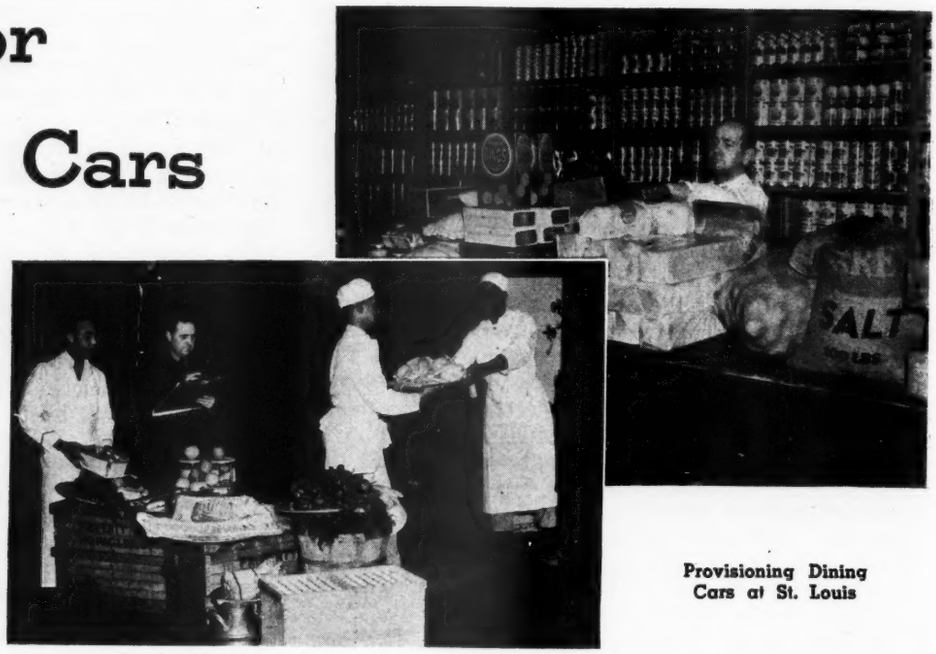
"Following are some of the recent developments yielded by the continuing effort of the Research Division to improve the products and services supplied by the corporation's subsidiaries: A marked advance has been accomplished in welding technique, with resultant improvement in exterior appearance of the lightweight passenger cars produced, and with prospect of reduction in manufacturing cost of both freight and passenger equipment as additional experience is gained with the new fabricating methods; a new type of passenger car truck utilizing helical springs, hydraulic shock absorbers and rubber mountings, has been developed and installed under a number of lightweight Pullman and railroad passenger cars. The riding qualities of the cars thus equipped are superior to those obtained with trucks previously available, and the new truck will be used on all the lightweight sleeping car units now scheduled to be built in 1940; a new air conditioning system has been devised, combining the advantages of mechanical and electro-mehanical systems and effecting reductions in the weight and in the number of moving parts; a new disc-type brake is being developed and tested by Pullman engineers in collaboration with companies that specialize in braking systems; and new space arrangements, fluorescent lighting, and various other interior refinements were incorporated in equipment built in 1939.

Traffic and Operating Statistics

Item	Comparative Statement For Years Ended December 31 1935	1936	1937	1938	1939
CARS OWNED	8,027	8,004	7,763	7,578	7,052
CARS OPERATED	5,057	5,355	5,500	5,124	5,100
CAR MILES	758,554,032	825,945,721	872,598,392	818,481,116	825,745,133
REVENUE PASSENGERS:					
Berth	10,624,818	12,049,359	12,849,076	11,338,471	11,549,947
Seat	4,853,890	5,148,377	4,895,492	4,201,378	4,105,188
TOTAL	15,478,708	17,197,736	17,744,568	15,539,849	15,655,135
REVENUE PASSENGER MILES	7,146,269,648	8,354,840,293	9,170,428,451	8,269,882,057	8,485,399,123
REVENUE FROM CARS	$ 46,758,260	$ 52,645,993	$ 57,666,648	$ 54,444,640	$ 55,931,672
Average per Car	$ 9,246.43	$ 9,830.82	$ 10,484.46	$ 10,624.59	$ 10,967.21
EXPENSES	$ 48,405,241▲	$ 49,191,772▲	$ 53,447,531▲	$ 52,941,643▲	$ 53,755,353▲
Average per Car	$ 9,572.12▲	$ 9,185.80▲	$ 9,717.38▲	$ 10,331.29▲	$ 10,540.47▲
NET EARNING FROM CARS	$ *1,646,981**	$ 3,454,221 ⊕	$ 4,219,117 ⊕	$ 1,502,997 ⊕	$ 2,176,319 ⊕
TRAFFIC AVERAGES:					
Average Revenue per Passenger	$ 3.02	$ 3.06	$ 3.25	$ 3.50	$ 3.57
Average Net Earning per Passenger	$ *0.11**	$ 0.20	$ 0.24	$ 0.10	$ 0.14
Average Net Earning per Car per Day	$ *0.80**	$ 1.76	$ 2.10	$ 0.80	$ 1.17
Average Mileage per Car Operated	150,004	154,232	158,648	159,722	161,914
Average Journey per Passenger (Miles)	462	486	517	532	542
Average Miles per Car per Day	411	421	435	438	444
Average Loading per Car (Passengers)	9.42	10.12	10.51	10.10	10.28

*Figures in *italics* denote loss.
▲Includes Pullman proportion of expense of operation of air conditioning equipment.
⊕After provision for Federal Taxes.

Missouri Pacific Watches Supplies For Dining Cars



Provisioning Dining Cars at St. Louis

FOR several years, the purchasing and handling of food, supplies and equipment for dining cars has been included in the work of the purchases and stores department of the Missouri Pacific. It was a new experience for the purchases and stores department to be injected into the meat, fruit, vegetable and grocery business, not to mention the laundry, candy and news business, after dealing in coal, lumber, steel, oil and hardware, and the combination with the passenger traffic department of the railroad in dining car matters has produced interesting results.

In 1927, before the purchases and stores and the dining car departments became partners in the commissary business, the railroad served approximately 566,000 meals on its dining, dining-lounge and club cars and used approximately $260,000 of supplies, with an average commissary shelf stock of $65,000 per month. This railroad, like other roads, has not had as large a passenger business since 1929; however, in 1938 when the road served approximately 398,000 meals and used $210,000 of commissary supplies, its shelf stock averaged only $22,000 per month. This was smaller by $43,000 or 63 per cent than in 1927. The material handling force was reduced from 14 men in 1927 to 8 at the present time.

These changes do not reflect mere changes in accounting, but are the combined result of improvements in facilities and organization for handling commissary work and a more rigid control over stock, obtained with the aid of the dining car forces. While present figures exclude provisions for lunch counters which the road operated prior to 1929, these are not large and are more than off-set by the tap car supplies which are now carried on the trains.

Sixty-five Dining Cars

At the present time, the railroad has 65 dining, dining-lounge, dining-parlor, club, cafe, grill and lounge cars. Each of the diners carries approximately $5,000 of such equipment as kitchen utensils, silverware, chinaware, linen, etc., and requires for its operation about $3,000 of groceries and fresh meats, etc.; $533 of cigars and beverages; $1,172 of new linen; and $1,100 of tableware and kitchen equipment per month; in addition eight news stands operated by the company receive approximately $4,550 of supplies per month. Each car is regularly stocked with about 470 items of food and carries approximately 1,200 pieces of linen, 750 pieces of silver-

Open Shelving for Canned Goods—Lockers for Confections and Linen

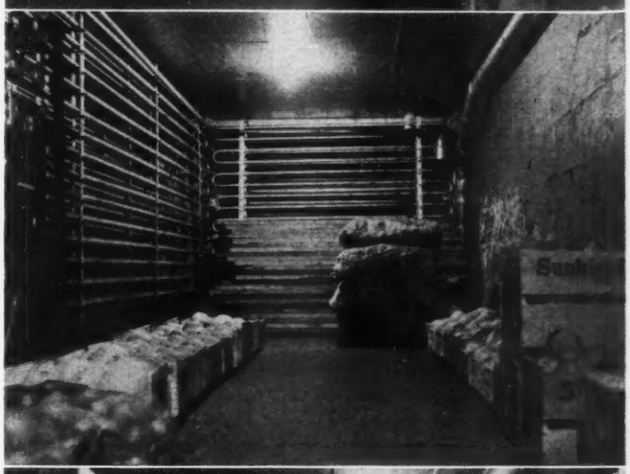
ware, and 1,500 pieces of china, pottery and utensils. Aggregate annual requirements include 25,000 dozen eggs, 250,000 lb. of potatoes, 450,000 lb. of meat and fowl, 50,000 lb. of fish, 40,000 heads of lettuce 26,000 lb. of butter, 6,500 lemons, 60,000 grapefruit, 100,000 oranges, 45,000 lb. of sugar and 60,000 loaves of bread.

The cars are stocked with supplies at St. Louis, Mo., Little Rock, Ark., and Kansas City, Mo., on the Missouri Pacific proper and at San Antonio, Tex., and Houston on the Texas Lines. Little Rock purchases its own fresh fruit and vegetables and Kansas City buys milk, cream and vegetables for cars operating north of that city. With these exceptions, Little Rock and Kansas City obtain their supplies from the St. Louis store and the eight news stands obtain their requirements from St. Louis.

Refrigeration Cuts Spoilage

The main commissary is located in the coach yard about three miles from the center of St. Louis and consists of a two-story reinforced concrete building with a basement. This building, which is leased from the Terminal Railroad of St. Louis, was enlarged when the purchases and stores department took over the handling of material. Approximately $30,000 was spent for new cooling rooms and $5,000 was spent for steel shelves and lockers and for additions to the material handling equipment. The refrigeration is mechanical, using ammonia and brine. The first floor has one room for counter service, one room for case goods, a linen room, an office and six coolers, including one for meat, another for fruits and vegetables, a third for poultry, cheese and lard, a fourth for fish and one for frozen supplies. This floor also has a cedar-lined humidor for tobaccos. Four more rooms with refrigeration are maintained in the basement, each capable of holding a carload of produce. Silverware and crockery are kept in a locked room on the third floor. The walls and ceilings of the building and the exteriors of all lockers are painted with aluminum. The plant is equipped with one auto truck, four four-wheeled push carts, one jack lift truck and a push-button elevator. All case goods are stored on skids.

A stock book is maintained for all material except perishables and inventory is taken on the first and fifteenth of every month. A loose-leaf type book listing two items of material per page is used and the record includes the quantity of each item on hand, due and ordered together with the receipts, the name of the supplier, the unit price and the monthly consumption. These



Cold Storage Rooms — Each Good For A Carload

Case Goods Stored on Skids

books are the basis of all requisitions on the purchasing department and are good for one year. A perpetual inventory of perishables is kept in the form of a tally sheet affording a continuous record of the incoming and outgoing material.

Withdrawals are made on requisitions received from dining car stewards or other stores. Items for dining cars, with the exception of equipment, are ordered from the commissary on a printed list which dining car stewards fill out at the end of each trip, marked to show the quantity of each item desired. The unit prices are applied after the order is filled and the list is then used for accounting purposes. Tableware, crockery, utensils and other equipment are ordered on written requisitions and a similar method is followed in ordering liquors. The news department is charged with supplies at their selling cost and a special requisition is therefore used.

Purchases to replenish the commissary stores are handled by a commissary buyer reporting to the general

Mixer for Soup and Salads

purchasing agent and the methods vary with the type of purchases involved. In general, meat is contracted for on the first of every month and ordered once each week or as required. Fresh fruits and vegetables are obtained once a week at the produce market. Milk and cream are ordered daily. Yearly contracts are arranged for ice cream, bread, cigars, tobacco, candy, etc., which provide for deliveries as called for. Laundry contracts are awarded on a yearly basis. Liquors, linen and chinaware are purchased once a month and other materials are usually ordered semi-monthly. The purchasing department receives approved requisitions for all requirements other than for fresh fruits which show the quantity on hand, due and used and the principle of competitive bidding is followed so far as practical in placing all orders. Only the finest food stuffs are purchased, however, and the department knows that the quality of the merchandise must not be sacrificed. While the purchasing is centered in the St. Louis area and along the Missouri Pacific Lines, products from practically every state in the Union are utilized during the course of a year in the preparation of the varied menus and to meet the needs and wants of the traveling public.

To promote economy, the commissary building includes a kitchen and devices for mixing salads and preparing other foods and the chef invariably confers with the commissary storekeeper when changing menus in order to use foodstuffs which would otherwise be wasted. Conservation on the cars is promoted by the dining department's audit of sales and by requiring stewards to fill out printed inventory lists at the end of each trip, showing the quantity of each item on hand at the beginning of the trip, the quantity supplied, the quantity used and the remainder on hand at the end of the trip. An equipment breakage report is also prepared.

The demands on the service are subject to wide fluctuations but with the present facilities and methods, the work has been simplified and the railroad is definitely ahead.

Why All the Wrecks on The German Railroads?

The occurrence of an extraordinary number of fatal accidents on the German Railways during the fall and winter has occasioned a belief in many quarters that the roads are in bad shape—both physically and in morale. We accordingly made inquiry of the best all-round source of information on European railway conditions (an authority who prefers to remain anonymous)—and the following is his report. —Editor.

IT is natural that, with the comparatively good safety record of the German State Railway, considerable discussion should have arisen as the result of the large number of accidents which have been reported as taking place on this property since the outbreak of war in September. While news from Germany is subject to extremely rigid censorship, it is impossible for any country to prevent news of serious railway disasters leaking through, and censorship of this kind would have resulted in the circulation of exaggerated rumors, particularly at a time when wishful thinking is a prevalent disease in many European countries.

To regard these accidents as a sign that the German Railway system, highly efficient at the outbreak of war, is breaking down would, in the opinion of this observer, be incorrect. Unfortunately, accident investigation reports are not published in Germany as they are by the Interstate Commerce Commission or by the British Ministry of Transport. Only occasionally in either Germany or France, and many other European countries, are the results of accident inquiries brought to the notice of employees to prevent recurrences.

Under present conditions it is impossible to obtain details of the causes of the various German Railway accidents from the outbreak of war until the first week in February, but it is known that at least 12 serious accidents have occurred, which may be summarized as follows:

Summary Statement of Reported Railway Accidents in Germany from the Outbreak of War to February 6, 1940

Date	Place and Nature of Accident
10-8-39	Collision between two passenger trains at Gesundbrunnen, just outside Berlin Stettiner Station on the main line to Sassnitz. 20 persons reported killed.
10-26-39	Derailment of a Vienna-Munich express at St. Valentin near Linz (former Austrian Federal Railways). 20 persons killed.
11-5-39	Derailment of a passenger train between Eger and Pilsen (former Czechoslovakian State Railways). 5 persons killed.
11-13-39	Head-on collision between two local passenger trains on single track between Langlieben and Rosegrund on the Cosel-Bauerwitz line in Upper Silesia. 43 persons killed.
11-19-39	Collision between a Berlin-Hamburg express and a local passenger train near Spandau. 9 persons killed.
11-26-39	Collision between a passenger train and a freight train

at Nieder Wöllstadt on the Frankfurt (Main)—Kassel main line. 15 persons killed.

12-12-39 Head-on collision between two passenger trains on the Hagen-Wetter-Bochum branch. 17 persons killed.

12-22-39 Collision between an express and a stationary passenger train at Genthin on the Berlin-Magdeburg main line. 196 persons killed.

12-22-39 Collision between a local passenger train and a freight train between Kluftern and Marksdorf on the line from Friedrichshafen to Konstanz. 99 persons killed.

1-19-40 Collision between a passenger and a freight train at Cracow. 5 passengers killed.

End of January Derailment of a freight (?) train on line between Sackingen and Lorrach (near Basel).

2-5-40 Freight train collides with bus at grade crossing Ocholt and Cloppenburg near Munster.

12 Reported Accidents: 9 Collisions and 3 Derailments. Total dead in German railway accidents now stated to be 442.

The toll of deaths resulting to passengers and staff in these 12 accidents is estimated to total over 440 persons, and it is reasonable to suppose that there have been a large number of less serious accidents which have not been reported outside Germany and probably have not resulted in very heavy fatalities.

The interpretation given to these accidents in most quarters has been that they must be attributed to deterioration of rolling stock and track, coupled with chaotic operating conditions, but an analysis of the accidents does not serve to bear out this view, since by far the majority of them in Germany proper, as opposed to Austria, Czecho-Slovakia and Poland, have been collisions, and the cause of collisions is usually a failure of the human element due to fatigue, a mental lapse, illness or worry. A statistical comparison of railway accidents and particularly the casualties resulting therefrom is always unsatisfactory for the reason that the results of any individual railway accident must be largely fortuitous.

Defective equipment, track or materials can be ruled out as the cause of the seven accidents, out of the first nine which took the form of collisions, though it is possible that defective signaling equipment or brake gear was the main or a contributory cause.

In reality, the only accident concerning which details have been received is that which took place at Genthin on December 22, when at least 196 persons are known to have been killed. This was one of the worst railway disasters in the history of the German Railway and arose, as so many railway accidents do, from a series of extraordinary coincidences; it is of interest that it occurred on a section of line equipped with the induction automatic train control system. A brief outline of the main causes of this accident insofar as they are known forms the subject of a concluding section of this report.

The two recent accidents early in 1940 in which trains collided with motor buses which had crashed through the barriers of grade crossings, while technically railway accidents, cannot be attributed wholly to negligence of railway employees until detailed information is available.

In studying these accident figures, it should be remembered that the German Railway has been working under tremendous pressure since September, 1939, and even prior to that. The mobilization, according to the official statement of the German Minister of Transport, was virtually complete by September 1, and the diversion of foreign trade from sea routes to railway handling, as well as the transfer of highway traffic to the rails, due to the need for economizing gasoline and diesel oil, has thrown an almost insupportable burden on the railway system. Since Christmas, the freezing of the inland waterways has increased this burden.

In general terms, however, the technical officers of the railroads in neutral countries bordering on Germany attribute the frequency of accidents on the German Railway to the over-long hours worked by the railroad employees; for instance, they are known to be working 75 to 80 hours per week, and in the repair shops 12-hour turns alternately are worked. The food is believed to be quite inadequate for heavy railroad work, and there are the added difficulties due to the almost complete absence of illumination at night. Many of the regular employees have been called to army service, and others have been sent to Austria, Czecho-Slovakia, Poland and recently to Russia, with the consequence that there are large numbers of inadequately trained employees in service. Another reason of importance is the preference in promotion which has been given to Nazi Party members since 1933, and this applies to every job on the German Railway from the "Generaldirektor" down. It is generally the older and experienced men who have been sent to conquered territories now occupied by the Nazis, and consequently the younger and less experienced men are employed within the original German territory.

Since the whole of Germany's war effort is based upon an efficient railway transportation system, these internal troubles are of significance. It is also of interest to note that, so far as is known, few if any of the accidents could be attributed to deliberate sabotage.

The accident at Genthin, which occurred at about 1:00 a. m. on December 22, resulting in 196 deaths, was a rear-end collision between two express passenger trains. The first train was stopped by signals outside Genthin station; the signal was cleared and the train proceeded. Before it had passed through the station, advice was received from the block post in the rear (the line, like all German main lines is operated on the manual block system) that the following train had failed to stop at the signal there and had incorrectly entered the section between that block post and Genthin.

The man on duty at Genthin station thereupon hurried from his office to exhibit a hand signal to this train in case it should fail to stop at the signal outside Genthin station. Unfortunately his action was noticed by the fireman of the first train who glanced back as his train was passing through Genthin station; he assumed that it was his train that was being flagged and an emergency brake application was made. The collision occurred immediately afterwards, the engineer of the train being killed. There is no information available as to the reason why the second train failed to stop at the block post in rear nor whether the tail lamps of the first train were observed and an effort made to stop the train. It seems, however, fairly certain that failure of the human factor was the primary cause of the accident, although there may also have been a failure of the A. T. C. equipment, assuming, what is not necessarily the case, that the locomotive was so equipped.

To assist in getting the situation as regards German railway safety in proper perspective, the following statistics of German accidents are reproduced from official sources:

Accident Statistics — German Railway

		1929	1933	1937	1938
Derailments	No.	466	251	498	622
Collisions	No.	299	176	461	614
Collisions with road vehicles	No.	311	199	318	456
Accidents to persons and other accidents not enumerated above	No.	2,839	1,376	1,776	2,357
Total accidents		3,915	2,002	3,053	4,049
Passengers carried	Millions	1,980	1,241	1,808	2,042
Passengers killed	No.	151	69	129	144
Passengers injured	No.	888	337	959	1,361
Employees killed	No.	427	261	448	557
Employees injured	No.	1,678	694	939	1,378
No. of accidents per million train-km.		5.78	3.22	3.71	4.24

NOTE: Figures given of fatalities and injuries include accidents of all descriptions, and are not confined to train accidents.

Motor Transport Section

Six Modern Buses Have Just Been Purchased for Valley Service

Motorizing the Rio Grande Valley

Missouri Pacific gives rail-highway co-ordination to fertile agricultural section of South Texas

THE Lower Rio Grande Valley of Texas, a triangular agricultural area bounded by the Rio Grande river on the south, the Gulf of Mexico on the east, and the King ranch and desert country on the north, is a large traffic producer for the Missouri Pacific Lines. It is a heavily settled district, with cities and towns every few miles and the M. P. has built the network of branch-lines shown on the accompanying map to serve these communities.

The problem of providing adequate passenger and l. c. l. freight service on these branch lines has always been a difficult one, and, with the growth of competition in the last ten years, it has become acute, with a vital necessity for providing adequate and flexible service to meet that given by competitors. In the last few years, the M. P. has met the challenge by installing a co-ordinated rail-highway service for both freight and passengers in the Valley.

Co-Ordination Needed

For many years, a system of local trains has been operated to serve the loading sheds and other perishable shipping points on the various branch lines in this territory. These trains distribute empty "freezers" to the various loading points and bring loads into the yard at Harlingen, Texas, where they are built into perishable "blocks" for northbound movement on fast schedules.

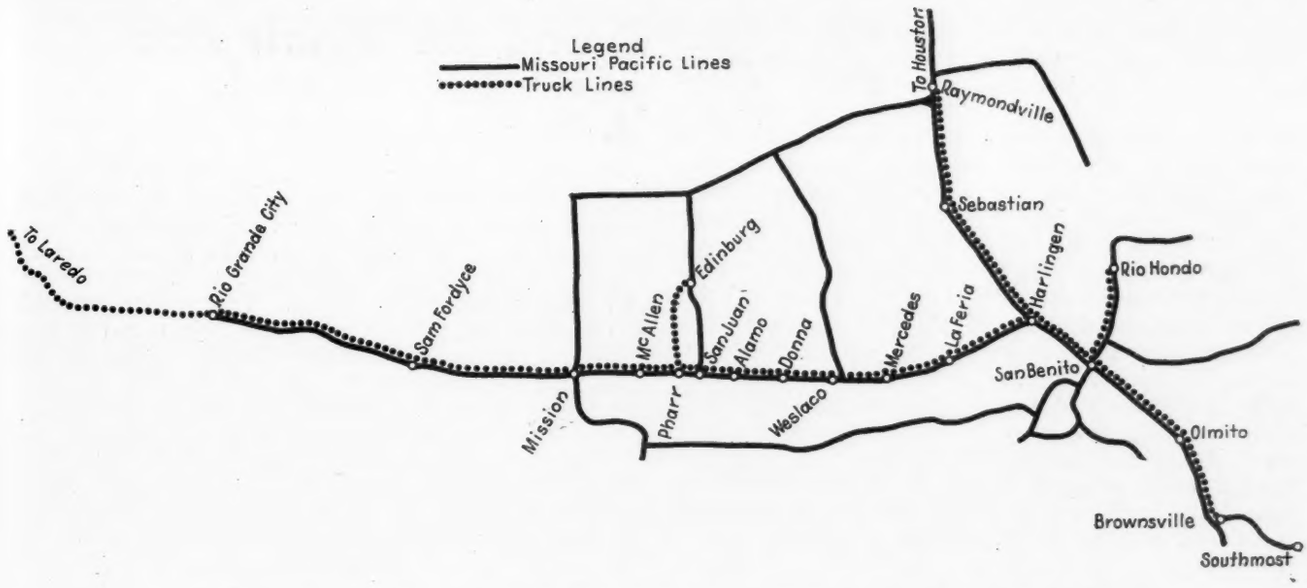
For some years, merchandise traffic inbound was peddled to Valley points by these trains, which also picked up what l. c. l. traffic was offered for northbound movement. This presented certain difficulties, since it burdened the local trains with merchandise, which interfered with their primary purpose of distributing empties and gathering loads. It also forced them to make many additional stops, as the empty and loaded cars have to be hauled to and from the loading sheds while the l. c. l. traffic had to be handled at the freight stations, involving additional switching, which further delayed the trains.

The New Service

As a first and important step in improving this service, a fast overnight merchandise train was inaugurated from Houston to Harlingen, 347 miles, which leaves Houston at 7 p. m., after the freighthouses close there and arrives at Harlingen early the following morning. A connection for this train leaves San Antonio in the evening and is switched into the Houston-Harlingen train at Odem. All l. c. l. freight for the Valley is consolidated in cars loaded to Harlingen on this train, whereas previously through merchandise cars were loaded to ten different points in the Valley. This results in heavier loading of cars, and a saving in car miles.

Truck Routes

On the arrival of the merchandise at Harlingen at 6:20 a. m., it is transferred into M. P. highway trucks, which are scheduled to leave Harlingen at 7 a. m. One truck goes east to San Benito, carrying freight for that city and also for points on the branch line between San Benito and Hidalgo. There are relatively few towns on this branch and the freight is handled on a passenger rail



How the Missouri Pacific Serves Main and Branch Line Territory in the Lower Rio Grande Valley

motor car, which leaves San Benito shortly after the truck arrives. If there is merchandise for the Rio Hondo branch, this truck makes such deliveries, and then proceeds to Brownsville. At 10:30 a. m., the truck returns to Harlingen, and then proceeds westward as far as Rio Grande City, making deliveries at cities along the way. It then leaves Rio Grande City at 3 p. m., and runs through to Harlingen without stops.

Another truck leaves Harlingen with merchandise for the west end of the Valley and makes no stops east of McAllen, delivering locally between that point and Rio Grande City. This truck returns to Mission, leaving there at 2:40 p. m. and making pick-ups at all local points en route.

Another truck leaves Harlingen and makes local deliveries as far west as Pharr. This truck then makes a round trip north to Edinburg, and returns to Harlingen to make short local trips as needed. A third truck serves local points from Harlingen north to Raymondville. Other trucks serve other local cities in the Valley, which is dotted with towns of 3,000 to 25,000 population every four or five miles throughout its length.

One of these trucks makes a round trip from Harlingen to Laredo, 356 miles, twice a week, as a part of a ship-rail-truck operation. Previous to the installation of the Valley truck lines, Laredo merchandise arriving at Galveston by boat from eastern seaboard points was handled by rail through Galveston, Houston and smaller terminals to San Antonio and thence to Laredo by rail. Under the present system, it is trucked from shipside at Galveston to Algoa, on the main line just south of Houston, and put on the fast merchandise train there, arriving in Harlingen the following morning. It is then trucked 178 miles to Laredo, arriving about noon and saving from two to three days as compared with the former method of handling. Since this co-ordinated operation began, on March 1, 1939, it has been possible to speed deliveries to local points by from 24 to 48 hr., by operating approximately 800 truck miles per day.

Co-Ordinated Passenger Service

For more than ten years, the Missouri Pacific Transportation Company has also been operating bus service from Corpus Christi to Brownsville, 200 miles, with many local schedules in the Valley itself, several of which serve as train connection schedules. These schedules are constantly being added to as the business justifies. For example, one additional schedule was added to the Brownsville-Mission run on September 1, 1939, making

Part of the Fleet of Trucks Used by the Missouri Pacific in Co-ordinated Service

six such runs a day in all, and a schedule between Brownsville and Edcouch, via the river towns and Mercedes has been added in the last few months.

Train tickets are good on all M. P. T. buses. The railway operates two trains in each direction daily on its main line; the night train carries a Houston-Brownsville sleeper and a San Antonio-Mission sleeper, and a bus from Corpus Christi makes connection at Robstown with all night trains. The Brownsville-Mission bus schedules give passengers an opportunity to use the co-ordinated service between any of the trains and any point in the Valley served by the M. P., without delay.

Within the next few months, the schedules between Corpus Christi and Brownsville will be materially shortened. Hitherto, there was no public road through Kenedy county, which consists entirely of one huge ranch, but it is expected that such a highway will be opened shortly, which will give the M. P. T. a much shorter route than the present one, which makes a wide detour to the west to avoid Kenedy county.

Railway Safety Measures

By the application of railway safety principles, the Valley division of the M. P. T. won first place for the system in 1939 in miles per accident, despite the fact that the record for the system as a whole is excellent. The highway between Brownsville and Mission is known as "Main Street" because of the heavy traffic and the towns scattered every few miles along it. Safe driving is further complicated by the number of old cars driven in haphazard fashion by Mexican farm laborers. Nonetheless, five of the Valley bus drivers have completed 625,000 miles without an accident, one not having been involved in a mishap of any sort for four years, while three others have clear safety records for three years each.

The motorization in the Valley was not undertaken with any idea of saving in train miles. However, it has saved car miles, and, more important, it relieves from local trains and permits the train crews to concentrate on the highly complicated operations of switching the packing shed and other industry tracks and getting the carload perishables to Harlingen in time to make the fast northbound perishable blocks.

Doing the Whole Job

THE Southern Pacific and its highway subsidiary, the Pacific Motor Trucking Company, recently completed a mass movement of passengers and freight that would not have been possible without rail-highway co-ordination. This involved the complete transfer of the California state relief department from San Francisco to Los Angeles, involving several hundred employees and more than 500,000 lb. of office equipment and other miscellaneous freight. This service included the packing and picking up of the freight at the San Francisco office and the delivery, unpacking and setting up of the equipment in the new Los Angeles office in accordance with blue print specifications.

The state relief administration called for bids on the over-all cost, inviting railroads and truck lines to quote figures and submit guarantees of performance. After careful consultation, the Southern Pacific submitted a bid and when the bids were opened, its bid was found to be lower than the next lowest bid submitted by a combination of truck operators, resulting in a substantial saving to the state in transportation. As negotiations proceeded, it finally developed that rail service was the only transportation service upon which the state could safely rely to make good on a promise to pick the equipment up at San Francisco at 6 p. m. on Thursday, and have all equipment placed in the proper location in the new building at Los Angeles ready for work on Monday.

The Southern Pacific employed sub-contractors at San Francisco who started moving and loading operations promptly after the last state employee had left the building. Cars were loaded all during the night and shortly after noon the next day they departed for Los Angeles in a special train which reached its destination Saturday afternoon.

The Pacific Motor Trucking Company immediately began unloading and delivery operations and by 11 a. m. Sunday all the equipment had been delivered to the new headquarters in Los Angeles.

While the freight traffic people were working out the details and handling the freight movement, passenger traffic representatives perfected arrangements for moving the personnel so they were ready for work in Los Angeles on Monday.

An Entire Office Was Transported by the Southern Pacific

NEWS

Binkerd Surveys Equipment Needs

Retired cars must be replaced henceforth—could use at least 1000 new engines

"Only about 50,000 additional new cars are required to bring our freight-car carrying capacity back to what it was in 1914" —so writes Robert S. Binkerd in the April issue of "Atlantic Monthly," after a study and analysis of several months' duration of the physical condition of the railroads. "This shortage was provided for by orders during 1939 for 54,439 freight cars for domestic delivery; but, since at least 100 or more freight cars are destroyed or retired every operating day, further purchases must continue to be made during the current year sufficient to cover the losses and retirements.

"The total tractive force of the present locomotive inventory is substantially greater than in 1914, and still in excess of current need. Unfortunately, many of these locomotives are not fitted for the intensive type of operation which our railroads have developed. To maintain relatively high speed requires large drivers. Operation of small drivers at high speeds results in excessive vibration, which not only involves wear and tear on the track, but also means excessive time and cost of repairs. The majority of our reserve of existing freight locomotives have the small drivers consistent with the drag-haul operations of twenty-five years ago, but which are not consistent with the high speed of today.

"The same situation holds in boiler horsepower. Haulage of heavy trains hour after hour at the speeds of today calls for high sustained boiler horsepower. The older locomotives can still cope with service on branch lines and on main lines where trainloads are small; but for heavy, high-speed freight movements there is a real need for at least 1000 modern high-speed steam freight locomotives. If traffic continues to grow, this need may soon become 2000 or even 3000 such locomotives, largely of the 4-8-4 type.

"From the point of view of sheer capacity, the equipment needs of the railroads are approximately as stated above. But lower maintenance costs, higher intensity of use and greater profit of operation would undoubtedly be promoted by purchases of new equipment greatly in excess of these figures.

"During seven of the depression years a deficiency of something like 4,000,000 tons of heavy rail and about 50,000,000 ties has probably been created. Fortunately a large portion of this deferred maintenance can be made up in the course of a year or two. The railroads are already moving to meet this situation. In 1939 they applied about 850,000 tons of new rail against 599,000 tons in 1938; but, more important still, they ordered 1,329,000 tons of new rail for 1940 delivery. These were the largest rail orders since 1929. Purchases of ties during 1939 also increased about 17 per cent over 1938. Thus everything indicates that 1940 will be marked by a determined attack on deferred track maintenance.

"The railroads have a tremendously superior track and physical plant today, with some deferred maintenance to be made up. They have outstandingly improved operating methods, resulting in a great intensification in the use of plant and equipment. They have more than enough shop capacity to maintain their equipment. But there is a high degree of obsolescence in the existing ownership of cars and locomotives, with some shortage in the carrying capacity of the freight cars and a considerable need for replacing old slow freight locomotives with modern high-speed freight locomotives. As a nation we are tremendously fortunate in the fact that track and operating conditions have been so enormously improved because these are achievements, not of a day, but of long-continued effort over the years. On the other hand, making up the deferred maintenance in track and replacement of our car and locomotive inventories can be accomplished gradually in a relatively short time, provided our railroads have the income and capital necessary to finance the prompt remedy of these deficiencies.

"Just one thing is necessary for our country to secure adequate railroad transportation for the needs of tomorrow—and that one thing is the assurance of a reasonable return on the investment in our railroads. Granted this,—whether the next few years find us at war or at peace,—our railroads can give to the people of the United States a character of service never before realized anywhere."

Retirement Act Amendment

Representative Shafer, Republican of Michigan, has offered in the House H. R. 8981, a bill to extend pension benefits under the Railroad Retirement Act of 1937 to certain employees for services rendered outside the United States and to increase the amount of pension payable to pensioners under the Act.

Bailey Cautions Waterways Fans

Believes halt must come in expenditures and that users should pay tolls

The National Rivers and Harbors Congress, holding its 35th annual convention in Washington, D. C., on March 14 and 15, heard what the chairman of its board of directors, former Representative Driver of Arkansas, called "the frankest statement I have ever heard at one of our meetings" when Senator Bailey, Democrat of North Carolina and chairman of the Senate commerce committee, told the group that a halt must be called in government spending for the improvement and maintenance of the country's rivers and harbors and suggested that tolls should be charged those who use the waterways to defray the annual maintenance cost, which he estimated at $52,000,000. At the same time Senator Bailey told the meeting that on the previous day he had talked with President Roosevelt who had warned him that the time had come to cease voting large authorizations for rivers and harbors improvements and had urged that no bill be enacted at this session.

Senator Bailey declared that the President "didn't say that he would veto" the legislation, but that he "certainly didn't pull any punches in letting us know that he thought it would be unwise." The Senator then told the convention that he thought there was little likelihood of a rivers and harbors authorization bill this session.

In his extemporaneous remarks to the Congress, Senator Bailey made it very clear that he felt the rivers and harbors movement had gotten out of control and that a halt must be called to this type of spending or the country would eventually find itself bankrupt. He was opposed to bankrupting the country and was likewise opposed to any more $407,000,000 bills such as his committee approved last session but called back for more mature consideration this session.

Turning to the subject of tolls for waterways, Senator Bailey stated that the suggestion had been made to him that those "who use the rivers and harbors and canals should pay at least the annual upkeep of $52,000,000." "That is proposed to us," he continued, "in the suggestion of a tonnage tax like they have in England. If a ship stops at a harbor in England over-

(*Continued on page 568*)

Wilgus Predicts R. R. Socialism

Former N. Y. Central vice-pres. debates issue with Gormley before D. C. engineers

"Are the Railroads of the United States Facing Nationalization?" was the subject debated by Col. William J. Wilgus, consulting engineer of New York, and M. J. Gormley, executive assistant of the Association of American Railroads, at a March 15 meeting of the District of Columbia Section, American Society of Civil Engineers. Otto S. Beyer, chairman of the National Mediation Board, presided at the session which was held at the Cosmos Club, Washington, D. C.

Making the address on the affirmative side, Col. Wilgus made it clear at the outset that it would not be his purpose to argue in favor of government ownership *per se*, "but rather to point to its inevitability . . ." Mr. Gormley wondered why the subject had come up at a time when railroads were rendering efficient service and keeping themselves ready to meet any anticipated future demands; and he warned that the real question is whether "we want to change our present form of government," because as he sees it there is little doubt that government ownership of railroads would be followed "by further extension of government ownership."

Getting under way with his "inevitability" arguments, Col. Wilgus called the railroads the "key-log in our economic jam." "Their speedy rejuvenation, through expenditures upon them of needed billions of new self-supporting capital now idle," he said, "would break the jam and at the same time fit them for adequate service and national defense. Impending government ownership if properly harnessed while there is yet time would serve these ends." The cause of the "railroad debacle," in the opinion of Col. Wilgus, "has been the post-war maintenance of freight and passenger rates at a far higher level than the price level of commodities on the movement of which the railroads depend for income." He conceded that resultant diversions of traffic have been to subsidized competitors, but nevertheless pointed out that the "facts" must be faced; and the "facts" demonstrate that "with their credit gone our privately-owned railroads no longer can adequately serve the public interest."

Thus Col. Wilgus would "accept the situation and wisely prepare for the change," it being better to shape the "impending danger" to "our ends" than "avert our gaze and perhaps perish." The latter term was used "advisedly" to stress the affect on national defense of railroad abandonments which might contemplate giving up vital lines.

Quoting statistics and authorities in support of his statement that five billions of new money is needed for railroad rehabilitation and improvements, Col. Wilgus proceeded upon a "where's-the-money-coming-from?" search. He sees no hope from prospective increases in rates or traffic volume; and thinks "it may be safely said" that "no substantial relief" is to be looked for in the direction of lessened outgo for wages, materials and taxes. Neither does he think that "putting them through the ringer" would restore railroad credit—at least, not in time. Nor does Col. Wilgus expect much from transportation legislation pending in Congress—"Regulation of their diet will not help when they need food to save them from starvation."

Executive Assistant Gormley of the A. A. R. proceeded from his aforementioned query as to why the subject had come up to take a look at the record so far as service is concerned. He highlighted the post-1923 improvements in service and operating efficiency, pointing out how such improvements have culminated in the present situation wherein "it can not be truthfully be said that there is any necessity for government ownership from the standpoint of service to the public." Previously Mr. Gormley had asserted that any comparison of the capacity of the railroads today with any previous period, "based only on units of equipment owned means absolutely nothing—the greatly increased efficiency must be taken into consideration." At another point in his address he told how the railroads "have met the impact of economic depression by a consistent increase in efficiency and reduction of the unit costs of operation." Mr. Gormley gave the post-1923 expenditures of nine billion dollars for modernization and improvements the major share of credit for the expense-cutting record which he called "the accomplishment not of a decadent industry but of a virile, dynamic and progressive industry with extraordinary recuperative powers capable of constant adaptation to new and changing conditions."

The record of 1939, the A. A. R. executive assistant, found "most encouraging," adding that the financial situation, while "far from being satisfactory," is "not by any means hopeless." In Mr. Gormley's opinion "very large savings in operating expenses will continue to flow in the future, as they have in the past, from expenditures for new equipment and for improvements of every kind that will reduce operating expenses." He explained that "the extent to which this can be accomplished will depend upon net earnings."

Increased net earnings, Mr. Gormley went on, will flow directly from an increase in traffic; and the latter will come about as a result of "a more enlightened understanding on the part of the shipping public" of the "vital role" which railroads play. Experiences of the past winter "with frozen and unusable waterways and snow-blocked highways" should help bring about such an understanding, Mr. Gormley thought. Continuing, the A. A. R. executive assistant touched upon the prospect of savings through consolidations—"very small compared with the savings of one and one-third billion dollars annually, on the average, which has been effected in operating expenses since 1921."

P. & S. Division to Meet in June

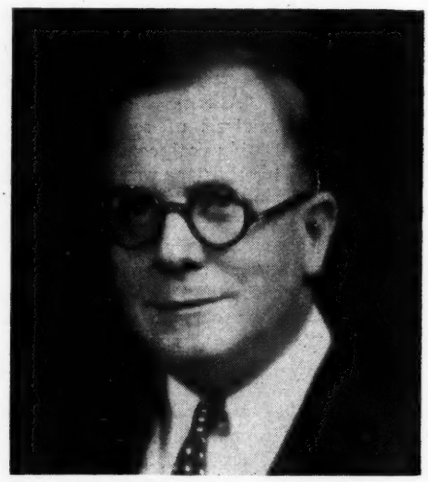
The Purchases and Stores Division of the Association of American Railroads will hold a two-day annual meeting in New York City in June, the exact dates for which have not as yet been determined.

Caskie to Leave I. C. C. on April 1

Resigns to return to private business; term would expire Dec. 31, 1941

Interstate Commerce Commissioner Marion M. Caskie whose term would have expired on December 31, 1941, has resigned effective April 1 to enter private business as vice-president of the Reynolds Metal Company with headquarters at Richmond, Va. Commissioner Caskie's resignation was announced on March 20 in a White House statement which said that President Roosevelt had accepted it.

Explaining that he was leaving the commission only because the opportunity to return to the Reynolds Company (with which he was previously associated during 1930-31) was one he could not well afford to reject. Mr. Caskie nevertheless expressed regret over the prospect of parting with a "fine bunch of colleagues" who comprise a group as "hard-working" as can be found in the public service. From the standpoint of the commission and the country, Chairman Eastman was "distressed by the resignation of Commissioner Caskie;" and the chairman was sure that "this feeling is shared by every member of the commission."



Underwood & Underwood

Marion M. Caskie

In his letter of resignation, Mr. Caskie expressed his gratitude to the President for the opportunity "to render public service on such an important body as the Interstate Commerce Commission," adding that he had been "very happy in such service," but he now finds it "imperative, in the interests of my family and other dependents, to return to private business." The President's reply stated that the resignation was accepted with regret—because "your service has been long, varied and of great usefulness to the federal government and in a special way to the public whose interests are so intimately interwoven with the functions which you have performed." Also, Mr. Roosevelt wanted Commissioner Caskie to know "that I appreciate all you have

(*Continued on page 568*)

Pension Payments Exceed Estimates

Outlay during the first four years will run ahead by about $165,000,000

When the first four years of Railroad Retirement Board operations under the present pension plan will have been completed at the close of the fiscal year ending June 30, 1941, the tax collections under the Carriers Taxing Act are expected to have fallen eight or 10 million dollars short of the original estimates while payments of annuities and other benefits under the Railroad Retirement Act will have been about $165,000,000 more than was contemplated. This situation was revealed by Murray W. Latimer, chairman of the Retirement Board, in testimony presented last month at hearings before a sub-committee of the House committee on appropriations on the Department of Labor-Federal Security Agency Appropriation Bill for 1941. Funds for the Retirement Board, formerly carried in the Independent Offices Appropriation Bill, are now provided in this Labor-Social Security measure; and Mr. Latimer's and other testimony before the sub-committee was made public when the bill was reported in the House this week.

Mr. Latimer told Representative Tarver, Democrat of Georgia, chairman of the sub-committee, that "if conditions go along as they are now additional revenue will undoubtedly be necessary." While he was unable to say how long it would be "safe" to continue with the present tax set-up, the Retirement Board chairman went on to tell of an actuarial advisory committee which the Board now has working "on a complete revaluation of liabilities under the act." Mr. Latimer explained that the law requires such a valuation at least once every three years; and the Board hopes "in the near future" to send to Congress a complete report on the matter.

Previously Mr. Latimer had given the figures and discussed the aforementioned over-estimate of revenues and under-estimate of benefit payments. In the former connection, he said, there will have been collected by the end of fiscal 1941 a total of about $518,000,000 in taxes as against an original estimate of about $526,000,000 or $528,000,000. He pointed out that percentagewise the estimate was off only about two per cent, adding "it is the wrong way, unfortunately."

"On the amount to be paid out in benefits," Mr. Latimer went on, "we constructed an estimate based on the number of individuals who had attained age 65 and who were eligible for retirement. We assumed that persons in good health would remain in service until age 70 and that all those who were not in good health would retire when they were disabled, which gave us an average age of retirement of about 67.4 years. We assumed that the average payment would be $900 per year for the full annuities, and for the time it is under 65, we made reductions in the proper ratio, but age 65, we estimated that the average would be at the rate of $900 per year. The actual payment, the average income has been slightly under $900 a year. The average comparable to the $900, has been about $840.

"The average age of retirement, however, instead of being 67½ years, has been closer to 66, in a few individual months it has dropped almost to 65, with the result that we are today making payments to about 140,000 individuals, as against an original estimate of around 81,000. We originally estimated that the payments through the 1941 fiscal year would be about $271,546,000, whereas our latest estimates indicate that they will be about $436,987,000. We will have spent at the end of the 1941 fiscal year some $165,000,000 more than was estimated."

Responding to questions from Representative Tarver, Mr. Latimer agreed that the trend of the past three years could not be permitted to continue "indefinitely." He pointed out, however, that the question "is mainly one of the age of retirement." "I am inclined to think," the Retirement Board chairman went on, "that we would have been in reasonably good shape except for the fact that within four months after the act came into effect the largest percentage of employment reduction in the history of railroad employment took place. Shops were closed down, branches were discontinued, men were furloughed right and left, and a great many of them who were getting substantial sums as long as they worked a reasonable amount of time, found themselves out. Of course, the railroads and the men themselves tried to get as many of the older men to retire as possible, and we had a real avalanche of retirements." Mr. Latimer estimated that "probably around two per cent" of present railroad employees are over 65, adding that compulsory retirement at 65—for which "there is a strong sentiment among the younger group"—would add from ninety to ninety five million dollars a year to the cost of paying benefits.

Mr. Latimer also testified concerning the Board's work of administering the Railroad Unemployment Insurance Act. He stated that from July 1, 1939, to February 2, 1940, the benefit payments under that act had been $7,783,653, while the administrative expenses "have been approximately one-third that amount." In the latter connection he added the following comment: "Of course, unemployment insurance is a kind of thing where your administrative expenses—there are a certain group of people who have been very much worried about that situation, ourselves included—when unemployment is light you just can't lay off these people, because you may be faced tomorrow with a large number of lay-offs and you have to have a substantial force there who can take care of those claims. In a year like 1938 we would have had to increase our administrative expenses very little, and yet we would have paid out several times as much money. Later Representative Tarver said that one-third seemed an "unreasonably large" ratio of administrative expenses to unemployment insurance benefits; and Mr. Latimer agreed that "the ratio is too high." He thinks "the cure lies, not in reducing administrative expenses, but increasing benefits, which the fund is well able to do."

"Trade Barrier" Hearings Begin

F. Bane of Council of State Govts. first witness before Monopoly Committee

Hearings on the subject of "Interstate Trade Barriers" got under way before the Temporary National Economic Committee (Monopoly Committee) on March 18, with Frank Bane, executive director of the Council of State Governments, as the initial witness. Discussing, as a part of his presentation, the subject of interstate barriers as they affect motor carriers, Mr. Bane told the committee that motor carriers, especially trucks, are affected by cumulative taxes as they travel through two or more states, although reciprocity agreements in license fees are being entered into by "an increasing number of states". He also pointed out that special license fees on independent truckers who travel from state to state are also frequently levied. One method of enforcing these requirements, he observed, was through the port-of-entry system.

Turning to the question of what has been done to minimize the effects of "interstate trade barriers" in this field, Mr. Bane told the committee that the Oklahoma legislature has repealed its port-of-entry law, and Texas has dropped her proposal to establish a similar system. At the same time, he continued, New Mexico approved legislation permitting the state to enter into reciprocal agreements allowing livestock growers to use their motor vehicles in New Mexico and neighboring states by paying license fees only in their place of residence. Also, according to Mr. Bane, New Mexico further lowered restrictions on trucks bringing lumber and livestock into the state, while Arizona, her neighbor, defeated a bill to prohibit the transportation of inflammable liquids in motor vehicles in quantities greater than 1,500 gallons.

Concluding his remarks, Mr. Bane proposed that the committee recommend to the Congress the establishment at its present session of a continuing committee on federal-state relations. Such a committee, in Mr. Bane's opinion, could well follow the pattern of the T. N. E. C. and consist of representatives from the Senate, the House, and the administrative branch of the government, and could "work in cooperation with the organization representing the states, namely, the Council of State Governments, and could survey the entire situation in all of its ramifications with the idea of presenting to the next Congress a comprehensive plan looking toward cooperation and participation by all levels of government which, it has been clearly demonstrated, is necessary for a practical solution of the problem of interstate trade barriers".

Dr. F. Eugene Melder, professor of Economics at Clark University, in outlining the history of trade barriers in this country, asserted that he was convinced after seven years of study of the problem, "that our states have been following a dangerous course in creating restrictions to commerce,

which tend to prevent increased production, more efficient distribution, cheaper transportation, and thus tend to curb improvements in the nation's living standards. These are dangerous symptoms—symptoms of a dry rot which might have fatal consequences if not checked, for they might lead to economic breakdown such as we have never before experienced, and from the experience of Central Europe, such would be the surest road to the destruction of our democratic institutions".

Witnesses for the motor carrier and private automobile industries were scheduled to appear at the end of the week.

R. F. C. Loans to Railroads

The Reconstruction Finance Corporation has announced that since it resumed lending during February, 1938, it has authorized 7,355 loans aggregating $1,548,446,228. Of this number, 59 went to railroads which had borrowed a total of $251,351,312 up to March 12, 1940.

Twenty-Six Killed at Grade Crossing

Twenty-six fruit pickers were killed and 16 injured at a highway grade crossing near McAllen, Tex., on March 14, when the truck in which they were riding to an orchard ran in front of a Missouri Pacific passenger train. The Rio Grande valley highway, on which the accident occurred, runs parallel to the railroad and crosses it at this point.

Mississippi Ice Floes Gone; I. C. C. Cancels Service Order No. 66

Because the "emergency due to ice gorges in the Mississippi River" has passed the Interstate Commerce Commission, Division 3, has issued Service Order No. 66-A, canceling Service Order No. 66 issued to permit railroads to meet conditions wherein the ice floes had tied up car ferry operations of the Natchez & Southern between Natchez, Miss., and Vidalia, La.

Pacific Railway Club Banquets March 21

The Pacific Railway Club held its 23rd annual meeting and banquet at the Palace Hotel, San Francisco, Cal., on March 21. R. L. Riley, president, Railroad Commission of the State of California, was the principal speaker. During the program, honorary membership was conferred on A. D. McDonald, president, Southern Pacific, and E. J. Engel, president, Atchison, Topeka & Santa Fe.

Would Exempt Ships from Panama Tolls

Senator Downey, Democrat of California, has introduced in the Senate S. 3627, a measure which would amend section 5 of the Panama Canal Act by adding the following sentence at the end of the first paragraph: "No tolls shall be levied upon those vessels engaged in the intercoastal trade of the United States, which have been certified by the Secretary of the Navy to the Secretary of War as being suitable for economical and speedy conversion into a naval or military auxiliary or otherwise suitable for the use of the United States in time of war or national emergency. No vessel shall be so certified by the Secretary of the Navy unless it (1) has accommodations for a minimum of 200 first or cabin class passengers, and (2) is capable of maintaining at least the speed of 16 9/10 knots per hour on full load displacement on a measured trial course with wind not in excess of force 3, Beaufort scale, with the machinery developing 80 per cent of the normal shaft horsepower".

Question Adequacy of I. C. C. Probe Into Auto Rates

Western and southeastern railroads have asked the Interstate Commerce Commission to dismiss them as parties in Docket No. 28190, New Automobiles in Interstate Commerce, unless the commission has a record complete enough to answer the following question:

"Will the commission without inquiring into the ramifications of the practices indulged in, not only on the part of the common and contract carriers by motor vehicles but also by the so-called dealer-operators, have a record upon which it can determine the inherent advantages of either motor or rail transportation?"

The carriers, in their petition, point out that they have desired all along to cooperate with the commission in its investigation, but that they do not believe that it has a complete enough record to warrant them remaining as parties to the case.

S. A. L. Runs Special Florida Coach Train a/c Heavy Business

Because Easter-time demands for reservations to Florida have filled up its regular trains, the Seaboard Air Line operated a special air-conditioned coach train, with all seats reserved, leaving New York on the morning of Good Friday, March 22, and arriving at Miami, Fla., early the next afternoon. Returning, this train will leave Miami on March 30 and arrive in New York on the following afternoon.

National Parks Special to Supplement the City of Denver

A fast steam train, the "National Parks Special" will be operated by the Union Pacific—Chicago & North Western between Chicago and Denver during the summer months, to supplement the Streamliner—City of of Denver. The train, which will carry standard and tourist Pullman sleepers, Challenger type coaches, a diner and an observation lounge car will make its first run out of Chicago at 1 p. m., on June 18, and its first trip out of Denver at 4:10 p. m. the following day. It will continue in operation until September 2.

Hearings on Lock-Toll Bills Deferred

Hearings scheduled for March 18 before a sub-committee of the House committee on interstate and foreign commerce on H. R. 6939 and H. R. 7633, bills proposing to prescribe tolls for the use of locks on all rivers of the country, have been postponed indefinitely. The postponement, it was explained at the committee rooms, was to meet the convenience of Representative Snyder, Democrat of Pennsylvania, sponsor of the bills; Mr. Snyder who desired to be present at the hearing was away from Washington on Monday.

New Haven's "Yankee Clipper" Celebrates Tenth Birthday

The tenth anniversary of the New York, New Haven & Hartford's "Yankee Clipper" was celebrated on March 17 when President H. S. Palmer cut a large birthday cake aboard the Clipper as it pulled out of South Station, Boston, Mass., on its regular 4½-hour run to New York. A similar birthday cake was cut aboard the companion Clipper.

During its 10 years' service, the Clipper has made 6,200 trips, carrying a half-million passengers some 1,500,000 miles. Each car of the all-Pullman train is named in honor of a famous New England clipper ship.

Hudson County (N. J.) RR's Reduce Smoke 95 P. C. Since '31

Railroads operating in Hudson County, N. J., (the largest terminal area across the Hudson river from New York) have made a reduction in smoke of more than 95 per cent since 1931, according to W. G. Christy, smoke abatement engineer of the county, in his annual report. Comparison is based on 10,396 Ringelmann chart smoke readings which show an average density of locomotive smoke in 1939 of 0.543 per cent, compared with an average density of 16.03 per cent during 1931. The New York, Ontario & Western made the best record of any road with an average of 0.145 per cent density. The West Shore (New York Central) stood second on the list with an average of 0.226 per cent.

Would Give Personal Injury Claims Preferred Status

Representative Thill, Republican of Wisconsin, has introduced in the House H. R. 8962, a bill which would amend section 77, subsection (n) of the Bankruptcy Act so that all claims for personal injuries to employees of a railroad, claims of personal representatives of deceased employees of a railroad, arising under state and federal laws, claims for personal injuries to others than employees arising from the operation of a railroad, and claims now or hereafter payable by sureties upon supersedeas, appeal, attachment, or garnishment bonds, executed by sureties without security, for and in any action brought against a railroad or its trustees, shall be preferred and paid out of the assets of the railroad as operating expenses of the road.

Bill Would Force T. V. A. to Pay for Bridges

Senators McKellar and Stewart, Democrats of Tennessee, have introduced in the Senate S. 3610, a bill which would authorize the Tennessee Valley Authority to use its funds for the alteration, reconstruction, or relocation of any highway or railroad bridges which are affected by the flooding of any land on account of dams erected

by this agency. The bill expressly provides that any alterations to railroad bridges are to be paid for by the Authority, and further that if any contracts have been made and any money paid by any railroad for the relocation or alteration of a bridge, the T. V. A. shall refund to the railroad the money paid together with interest at the rate of three per cent from the date of payment.

Northwest Locomotive Association Formed

The Northwest Locomotive Association has been formed at St. Paul, Minn., as a medium for the exchange of information by all persons interested in locomotives or motive power. Meetings for discussion and talks will be held on the last Monday of each month except during June, July and August. Officers are: President, H. A. O'Neal, inspector of the Bureau of Locomotive Inspection of the Interstate Commerce Commission; first vice-president, C. F. Guggisberg, mechanical engineer of the Minneapolis, St. Paul & Sault Ste. Marie; second vice-president, Godfrey Lamberg, shop superintendent of the Chicago, Milwaukee, St. Paul & Pacific; third vice-president, A. G. Neese, roundhouse foreman of the Chicago, Milwaukee, St. Paul & Pacific; secretary, G. F. Greenleaf, chief clerk to the mechanical engineer of the Northern Pacific; and treasurer F. W. Taylor, general foreman of the Northern Pacific.

February Operating Revenues 12.6 Per Cent Above February, 1939

Preliminary reports from 91 Class I railroads, representing 81.1 per cent of total operating revenues, made public today by the Association of American Railroads, show that those roads, in February, had estimated operating revenues amounting to $252,670,649 compared with $224,439,480 in the same month of 1939, and $343,816,342 in the same month of 1930. The February gross was 12.6 per cent above that of February, 1939, but 26.5 per cent below February, 1930.

Freight revenues of the 91 roads in February amounted to $208,336,029 compared with $182,279,461 in February, 1939, and $271,311,285 in February, 1930—14.3 per cent above the former, but 23.2 per cent below the same month in 1930. Passenger revenues totaled $25,064,931 compared with $24,131,577 in February, 1939, and $48,703,172 in February, 1930—3.9 per cent above the former, but 48.5 per cent below the same month in 1930.

No Action Taken to Drop Anti-Trust Suit

Inquiry at the Department of Justice this week revealed that no action has as yet been taken towards dismissing the anti-trust suit against the Association of American Railroads and its officers and member roads which was instituted last year when the Assistant Attorney-General Thurman Arnold filed a complaint accusing the railroads of refusing to establish joint through rates and routes with motor carriers. Recently the Board of Directors of the A. A. R. voted to rescind the resolution disapproving such through routes and rates and submitted the action to the constituent members for their ratification. It is understood that returns from the railroads ratifying this action are practically all in.

It has been expected that upon the ratification of the rescinding of the resolution the Department of Justice would move to dismiss the suit, but it has been learned at the Department that no such action has been taken or is contemplated until Mr. Arnold is satisfied that there remains in railroad circles no agitation against the establishment of joint rail-motor routes and rates.

Study of Railroad Traffic Losses

The Bureau of Railway Economics has prepared a study, to which it has given a limited distribution among railroad executives, which shows the growing gap between total goods distributed in this country (i. e., potential traffic) and the actual volume of railroad tonnage.

The study differs from similar analyses issued by the Bureau of Statistics of the I. C. C. in that these have calculated railroad tonnage in comparison with production, while the B. R. E. analysis bases its calculation on goods actually distributed.

The B. R. E. study shows potential traffic in 1939 at 85 per cent of the 1928 level, while railroad tonnage in 1939 was only 70 per cent of 1928. Railroad shipments were only 82 per cent of total traffic in 1939 (with the proportion handled by rail in 1928 taken as 100 per cent), indicating that 18 per cent of traffic which in 1928 moved by rail is now being transported in some other manner. The ratio of railroad traffic losses has grown each year without interruption.

Court Holds Southern is Not Responsible for M. & O. Debt

The United States Circuit Court of Appeals for the Fifth Circuit has held in a recent decision that the Southern is in no way liable for the Mobile & Ohio's debt to the Railroad Credit Corporation. The Circuit Court's ruling reversed a previous decision of the United States District Court in Alabama which had held that the Credit Corporation loan to the M. & O. totaling $712,683 plus interest, should be satisfied in full from the proceeds received by the Southern from the sale of M. & O. general mortgage bonds which the Southern now owns.

The sale of the Southern's holdings of $7,839,500 of M. & O. general mortgage bonds to the Gulf, Mobile & Northern for $7,295,000 forms an integral part of the plan for consolidating the G. M. & N. and the M. & O. which was recently approved by the Interstate Commerce Commission.

The Railroad Credit Corporation contended that its loan to the M. & O., only partially secured by miscellaneous securities, was made on the strength of promises by the Southern to extend all aid possible to the M. & O. Because of the Southern's control of the M. & O. and other special facts and circumstances, the Credit Corporation claimed that it was entitled to have the loan repaid in full. The District Court upheld this contention.

In reversing the District Court, the Circuit Court said that the R. C. C. claim was "wholly wanting in equity" and that the decree was "wrong". After citing a resolution of the Southern in 1931 to help the M. & O., the Court said that the R. C. C. loan was made "upon a definite statement of Southern's policy, a policy adhered to until adverse conditions made adherence impossible, and an equally definite statement that Southern was on no account to be held liable or looked to on account of the loan. To read Southern's resolution as creating an estoppel, to collect upon its first mortgage bonds until Railroad Credit's unsecured claim was first paid and on this estoppel to base a subrogation of Railroad Credit to Southern position as a first mortgage bondholder, does violence not only to the plain language of the resolution but to the truth and justice of the case."

Mexican Bureau Authorized to Buy Orient

The federal department of communications of Mexico was authorized by President Lazaro Cardenas on March 15, to begin negotiations with the Atchison, Topeka & Santa Fe for the purchase by the Mexican government of the Kansas City, Mexico & Orient lines in Mexico, which are controlled by the Santa Fe under lease. The government plans to extend the line to connect Topolobampo with Ciudad Juarez. The communications department was authorized to pay not more than 550,000 pesos ($92,350) for the rolling stock, equipment, franchises, shares of stock and mortgages. A down payment of 50,000 pesos ($8,450) would be made by the government within six months after closing the deal. Another 100,000 pesos ($16,900) would be paid in 20 monthly installments of 5,000 pesos ($845) each. The remaining 400,000 pesos ($67,000) would be paid in eight certificates of 50,000 pesos each, which would be redeemed at the rate of one certificate annually. Redemption payments would be guaranteed by the freight charges of the government owned United Sugar Company which operates the Los Mochis Central which is served by the Orient.

Canal Tolls Drive Business From N. Y.?—Nonsense Say RR's

The argument that industries would leave New York State if reasonable tolls were levied for the use of the 500-mile state Barge Canal system is fallacious, declares a memorandum presented on March 18 by L. W. Horning, in behalf of the Associated Railroads of New York State to the Committee on Judiciary of the State Assembly. While on the whole the document follows along the lines of a memorandum submitted at earlier hearings on the proposal to levy tolls, it does deal with arguments which "the other side" has inter-

(*News Continued on page 566*)

ANNUAL REPORT OF
PULLMAN INCORPORATED
AND ALL SUBSIDIARIES
For Fiscal Year 1939

TO STOCKHOLDERS:

* * *

Earnings

Consolidated Net Income of $4,009,475.68 ($1.03 per share) for 1939, after all charges and taxes, exceeded 1938 earnings of $2,295,829.16 ($0.59 per share) and somewhat more than covered the year's total dividend disbursement of $1.00 per share.

* * *

Financial Condition

Net Working Capital amounted to $70,639,811.38 as of December 31, 1939, as compared with $64,171,322.55 at the close of 1938. The total of Cash and U. S. Government securities (exclusive of those held in reserve funds) as of December 31, 1939 was $49,554,199.68, while total Current Assets of $85,708,521.04 were nearly six times Current Liabilities of $15,068,709.66.

Consolidated Income Account

FOR THE YEARS ENDED DECEMBER 31, 1939 AND 1938

EARNINGS:	1939	1938
FROM SLEEPING AND PARLOR CAR BUSINESS—		
Operating revenues	$60,664,266.20	$58,924,968.32
Operating expenses	$47,782,613.02	$46,271,145.60
Provision for depreciation	10,251,354.74	10,149,556.10
Total	$58,033,967.76	$56,420,701.70
Net Operating Income	$ 2,630,298.44	$ 2,504,266.62
*FROM MANUFACTURING BUSINESS—		
Net sales and operating revenues	$29,692,655.11	$33,102,137.05
Cost of goods sold and operating expenses	$25,175,983.81	$28,534,461.22
Provision for depreciation	2,204,900.71	2,292,881.25
Selling and administrative expenses	1,893,422.06	2,034,861.20
Total	$29,274,306.58	$32 62,203.67
Net Manufacturing Profit	$ 418,348.53	$ 239,933.38
FROM SECURITY INVESTMENTS—		
Income from Securities and Miscellaneous Income	$ 1,140,401.02	$ 1,059,837.25
Profit on Securities sold	791,310.40	40,513.82
Total	$ 1,931,711.42	$ 1,100,351.07
Less: Balances in closed banks written off, interest paid, and miscellaneous income deductions	$ 35,394.15	$ 23,829.09
Administrative expense of Pullman Inc.	212,218.58	213,598.99
Total	$ 247,612.73	$ 237,428.08
Net Investment Income	$ 1,684,098.69	$ 862,922.99
TOTAL EARNINGS FROM ALL SOURCES	$ 4,732,745.66	$ 3,607,122.99
Less: Provision for Federal Income Tax	732,269.98	1,311,293.83
BALANCE OF EARNINGS CARRIED TO SURPLUS	$ 4,009,475.68	$ 2,295,829.16

*Excluding Entreprises Industrielles Charentaises results in 1939.
NOTE: The French Subsidiary has not been consolidated in 1939. The year 1938 includes its profit earned of $88,968.40, and the year 1939 includes dividend received of $52,786.60 paid out of its current earnings.

A. F. BREVILLIER, Comptroller

Sleeping and Parlor Car Business

Pullman participated to some extent in the general expansion of domestic travel in 1939. A moderately improved traffic trend during the period of the New York and San Francisco Fairs was partially offset by declines in other months, with result that traffic volume for the full year was slightly larger than in 1938 but failed to match the 1937 recovery high mark.

* * *

Worthwhile earnings improvement in the business of this subsidiary depends primarily upon a substantial increase in traffic volume, which is dependent in turn upon sustained recovery of public purchasing power and upon adoption of concerted and effective rate and other promotional measures by all parties concerned with the operation and financial results of the first-class Rail-Pullman passenger service. In the last analysis, however, the "price tag" is the most important single factor, and placement of first-class fares on a more favorable basis with relation to competitive services would provide effective stimulus for an advance in Pullman travel volume.

Further installations of new-type lightweight sleeping cars were made in 1939 on roads having sufficient passenger traffic to warrant the increased investment, and still larger additions to the new-car fleet are in prospect for 1940.

An extraordinary passenger safety record was marred on August 12, 1939 by the death of two Pullman passengers in the sabotage derailment of the City of San Francisco Streamliner. This was the first accident involving fatality to a passenger in a Pullman car in nearly five years, during which period more than 76 million passengers were transported an aggregate distance of 39 billion passenger miles. Notwithstanding the unfortunate result of this derailment, *sleeping car travel in 1939 was many times safer than any other form of commercial transportation in this country* as accurately measured by the number of passenger miles per passenger fatality. This is a tribute to Railroad operating efficiency as well as to the inherently sound and protective qualities of Pullman car construction and safety practices.

Manufacturing Business

With industrial production and carloadings staging one of the swiftest upturns on record, the Railroads placed substantial freight car orders during the last four months of 1939, a satisfactory proportion of which was booked by the Corporation's manufacturing subsidiary. However, the revival of car-buying after a two-year lapse proved of short duration and there has been practically no equipment ordered thus far in 1940.

* * *

The purchase of only 194 passenger train cars by the Railroads in 1939 was less than in any year since 1933 and amounted to only about one-ninth of the average annual volume for this section of the industry in the period of more normal demand prior to 1930. In the restricted markets prevailing in recent years, more than 1,000 Pullman-built lightweight passenger train cars have been placed in service on the nation's Railroads or are now on order and account for over 70% of the total number of such cars ordered from all builders (or 62% excluding cars built for The Pullman Company) since the first successfully operable lightweight streamlined train in this country was completed at Pullman Car Works in February 1934, operated in experimental service, and then placed on exhibition at the Chicago Fair several months prior to the appearance of the next train of that type. Several complete streamlined train sets embodying the latest refinements of the car-building art were delivered by Pullman-Standard in 1939 for daylight operation between important terminals, and 78 new lightweight sleeping cars were built for The Pullman Company.

* * *

Research and Development

Following is a list of some of the recent developments yielded by the continuing effort of the Research Division to improve

the products and services supplied by the Corporation's subsidiaries:

A marked advance has been accomplished in welding technique, with resultant improvement in exterior appearance of the lightweight passenger cars produced, and with prospect of reduction in manufacturing cost of both freight and passenger equipment as additional experience is gained with the new fabricating methods.

A new type of passenger car truck utilizing helical springs, hydraulic shock absorbers, and rubber mountings, has been developed and installed under a number of lightweight Pullman and Railroad passenger cars. The riding qualities of the cars thus equipped are superior to those obtained with trucks previously available, and the new truck will be used on all the lightweight sleeping car units now scheduled to be built in 1940.

A new air conditioning system has been devised, combining the advantages of mechanical and electro-mechanical systems and effecting reductions in weight and in number of moving parts.

A new disc-type brake is being developed and tested by Pullman engineers in collaboration with companies that specialize in braking systems.

New space arrangements, fluorescent lighting, and various other interior refinements were incorporated in equipment built in 1939.

Pullman engineers are constantly experimenting with all of the metals and fabricating processes now available for modern car construction. In the present developmental state of the art there is no single carbuilding material or construction method that will meet the varying requirements of Railroad customers with respect to weight, cost, and other details of design. The

CONSOLIDATED BALANCE SHEET—DEC. 31, 1939 AND 1938

Assets

	1939	1938
CURRENT ASSETS:		
Cash	$40,634,672.37	$32,061,600.81
U. S. Government Securities (1939—Market Value $9,537,030.63)	8,919,527.31	17,231,377.22
Other Marketable Securities (1939—Market Value $1,268,978.86)	1,396,494.06	1,863,768.26
Accounts and Notes Receivable	9,562,718.48	6,380,440.35
Equipment Trust and Other Deferred-Payment Car Accounts	4,981,906.71	6,128,427.39
Inventories, at Cost—		
Carrier Subsidiary	$ 8,862,817.76	$ 7,360,352.42
Manufacturing Subsidiaries	11,350,384.35	3,294,476.80
	$ 20,213,202.11	$ 10,654,829.22
	$ 85,708,521.04	$ 74,320,443.25
INVESTMENTS:		
Investment in and Advances to Affiliated Companies—		
Domestic, at Cost	$ 3,484,300.00	$ 3,484,300.00
*Foreign	540,416.74	—
Other Securities, Investments and Claims, at Cost	2,667,385.17	2,678,726.43
	$ 6,692,101.91	$ 6,163,026.43
EQUIPMENT AND PROPERTY:		
Carrier Properties—		
Gross Investment	$251,222,164.98	$290,040,130.58
Depreciation Reserve	163,178,141.63	166,138,834.52
Net Depreciated Value	$ 88,044,023.35	$123,901,296.06
Manufacturing Properties—		
Gross Investment	$ 77,302,809.10	$ 79,905,830.98
Depreciation Reserve	36,883,418.63	36,208,245.23
Net Depreciated Value	$ 40,419,390.47	$ 43,697,585.75
Other Properties—		
Gross Investment	$ 3,444.48	$ 11,915.37
Depreciation Reserve	—	—
Net Depreciated Value	$ 3,444.48	$ 11,915.37
Aggregate—		
Gross Investment	$328,528,418.56	$369,957,876.93
Depreciation Reserve	200,061,560.26	202,347,079.75
Total Net Depreciated Value	$128,466,858.30	$167,610,797.18
DEFERRED CHARGES:		
Prepaid Expenses and Deferred Charges	$ 274,928.07	$ 404,146.60
OTHER ASSETS:		
Special Deposits with Various States under Compensation Acts	$ 295,087.93	$ 293,454.20
U. S. Government Securities—		
Held to fund Pension Reserves	—	5,549,292.49
Held to fund Fire and Casualty Liability Reserve	379,633.32	342,488.20
Deposits in Closed Banks	68,057.45	80,483.79
	$ 742,778.70	$ 6,265,718.68
TOTAL ASSETS	$221,885,188.02	$254,764,132.14

*Foreign subsidiary (Enterprises Industrielles Charentaises) de-consolidated in 1939 on account of war conditions in France, and investment therein included here at present carrying value.

A. F. BREVILLIER, Comptroller

Liabilities

	1939	1938
CURRENT LIABILITIES:		
Accounts Payable and Payrolls	$ 10,416,627.73	$ 4,861,212.00
Accrued Taxes, not yet due, including Provision for Federal Income Tax	4,652,081.93	5,287,908.70
	$ 15,068,709.66	$ 10,149,120.70

Liabilities—Continued

	1939	1938
RESERVES:		
For Employe Benefit Plans	$ 1,950,468.89	$ 1,381,413.73
For Pensions	—	5,607,538.14
For Uninsured Fire and Casualty Liability	381,071.20	353,058.11
For Experimental Cars and Installations	642,324.48	642,324.48
For Contingencies	4,807,696.95	4,807,696.95
Other Reserves	578,535.48	*889,221.32
	$ 8,360,097.00	$ 13,681,252.73
DEFERRED CREDITS:		
Air Conditioning Revenue Deferred	$ 4,370,613.61	$ 2,218,053.93
Other Deferred Credits	1,678,189.86	2,404,050.04
	$ 6,048,803.47	$ 4,622,103.97

CAPITAL STOCK:	SHARES 1939	SHARES 1938	1939	1938
Pullman Incorporated — no par value:				
Authorized	3,875,000	3,875,000		
Unissued	441	448		
Issued—				
At stated value of:				
$50 per share		3,874,552		$193,727,600.00
$40 per share	3,874,559		$154,982,360.00	
Reacquired— (In Treasury)				
At stated value of:				
$50 per share		54,363		2,718,150.00
$40 per share	54,365		2,174,600.00	
Outstanding—				
At stated value of:				
$50 per share		3,820,189		$191,009,450.00
$40 per share	3,820,194		$152,807,760.00	
The Pullman Company: (a subsidiary) Outstanding—				
At par value of $100 per share	63.274	67.279	6,327.40	6,727.90
			$152,814,087.40	$191,016,177.90

SURPLUS:		
Excess of value of property acquired by issue of shares of capital stock over the stated value of $50 per share plus the amount of the 1939 reduction of $10 per share in stated value of the capital stock of the corporation, less subsequent write-downs on said property out of this surplus as authorized by the Board of Directors	$ 88,443,687.67	$ 83,384,902.55
Net profits earned since April 30, 1927 (date of reorganization)	83,477,227.30	80,417,760.52
DEDUCT: Dividends paid during the period from April 30, 1927 to date	$171,920,914.97 132,327,424.48	$163,802,663.07 128,507,186.23
Balance, at December 31	$ 39,593,490.49	$ 35,295,476.84
TOTAL LIABILITIES	$221,885,188.02	$254,764,132.14

*Includes Reserve for Exchange Fluctuations (in accounts of Entreprises Industrielles Charentaises) amounting to $314,894.21 eliminated in 1939 by de-consolidation.

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continuing Pullman policy is to employ materials and fabricating techniques necessary to meet individualized requirements, with emphasis upon soundness, strength and economy of structure.

* * *

Substantial progress has been made with development of a new type of car, of combined coach-sleeper characteristics, in which along with passenger-carrying capacity in the range of the modern de luxe coach there are furnished comfortable daytime seating and genuine night-time sleeping accommodations consisting of an individual berth-bed offering privacy and sleeping comfort. This "coach-sleeper" is designed to offer to the economy-seeking traveler who is not satisfied with the characteristics of coach service for night-time travel, a real sleeper service at minimum charges for transportation and for the reserved accommodations. Much interest in this experiment has been expressed by Railroads, and the cars now being built in this type will soon be completed and ready for try-out.

The 200 lightweight box cars delivered to interested Railroads in 1938 have given excellent service, and an additional 500 cars of the same advanced type incorporating later improvements in design were sold or leased to various roads in 1939. Weighing about 21% less than standard box cars, with corresponding increase in the proportion of pay load in the gross tonnage hauled, and comparing favorably in cost, an extensive use of such modern lightweight freight cars would create important savings in freight transportation expense that would be directly reflected in the net earnings of the Railroads.

* * *

Equipment and Property

Changes in the Equipment and Property Account representing additions and retirements of physical properties in 1939, classified and compared with similar changes during 1938, were as follows:

Additions	1939	1938
Air conditioning apparatus in cars	$832,013.47	$366,912.91
Routine additions and betterments to cars	400,750.69	265,246.21
New and rebuilt Pullman cars	8,299,318.64	12,096,918.43
Improvements at laundries, shops, district offices, etc.	123,199.25	195,479.10
Improvements to plants, Pullman Railroad, and other properties of manufacturing subsidiaries	648,827.63	1,031,769.33
Total Additions	$10,304,109.68	$13,956,325.98
Retirements		
Cars and other Property	17,402,565.05	10,695,077.01
Net Retirements	$7,098,455.37	—
Net Additions	—	$3,261,248.97

* * *

During 1939 there were installed 136 Pullman general service cars, new and rebuilt, and 662 old cars were retired, leaving a total of 7,052 cars of all classes on the equipment list of the carrier subsidiary at the end of the year.

There were 5,119 air conditioned Pullman cars in operation at the close of 1939, accounting for nearly one-half of the total of 11,715 air conditioned cars of all ownerships on domestic railroads. Air conditioning is a built-in feature of all new-type Pullman cars, and the program of equipping the active fleet of standard-type cars with this facility is virtually completed.

* * *

Taxes

After long negotiation a settlement was reached during the year on Federal income tax returns for the years up to and including 1931, with exception of one item of deductibility in connection with stock sales to employees in 1929. The amount required in this settlement has been charged against the general reserve for all taxes, accrued in past years. The balance in this general tax reserve is believed to be sufficient to cover all taxes accrued through 1939, including provision for Federal income taxes for years not yet settled.

Taxes of all kinds totaling $5,149,285 were paid or accrued by the Corporation and its subsidiaries out of 1939 income. These taxes absorbed nearly three-fifths of the income before taxes and were equivalent to $1.33 per share on the Corporation's capital stock, or considerably more than the amount of income available for shareholders after provision for taxes.

Traffic and Operating Statistics
Comparative Statement For Years Ended December 31

ITEM	1935	1936	1937	1938	1939
CARS OWNED	8,027	8,004	7,763	7,578	7,052
CARS OPERATED	5,057	5,355	5,500	5,124	5,100
CAR MILES	758,554,032	825,945,721	872,598,392	818,481,116	825,745,133
REVENUE PASSENGERS:					
Berth	10,624,818	12,049,359	12,849,076	11,338,471	11,549,947
Seat	4,853,890	5,148,377	4,895,492	4,201,378	4,105,188
Total	15,478,708	17,197,736	17,744,568	15,539,849	15,655,135
REVENUE PASSENGER MILES	7,146,269,648	8,354,840,293	9,170,428,451	8,269,882,057	8,485,399,123
REVENUE FROM CARS	$ 46,758,260	$ 52,645,993	$ 57,666,648	$ 54,444,640	$ 55,931,672
Average per Car	$ 9,246.43	$ 9,830.82	$ 10,484.46	$ 10,624.59	$ 10,967.21
EXPENSES	$ 48,405,241†	$ 49,191,772†	$ 53,447,531†	$ 52,941,643†	$ 53,755,353†
Average per Car	$ 9,572.12†	$ 9,185.80†	$ 9,717.38†	$ 10,331.29†	$ 10,540.47†
NET EARNING FROM CARS	$ *1,646,981**	$ 3,454,221‡	$ 4,219,117‡	$ 1,502,997‡	$ 2,176,319‡
TRAFFIC AVERAGES:					
Average Revenue per Passenger	$ 3.02	$ 3.06	$ 3.25	$ 3.50	$ 3.57
Average Net Earning per Passenger	$ *0.11**	$ 0.20	$ 0.24	$ 0.10	$ 0.14
Average Net Earning per Car per Day	$ *0.89**	$ 1.76	$ 2.10	$ 0.80	$ 1.17
Average Mileage per Car Operated	150,004	154,232	158,648	159,722	161,914
Average Journey per Passenger (Miles)	462	486	517	532	542
Average Miles per Car per Day	411	421	435	438	444
Average Loading per Car (Passengers)	9.42	10.12	10.51	10.10	10.28

*Figures in *italics* denote loss.
†Includes Pullman proportion of expense of operation of air conditioning equipment.
‡After provision for Federal Taxes.

Dividends

The four quarterly dividend payments amounting in the aggregate to $3,820,238.25 or $1.00 per share on the outstanding stock in 1939 were fully covered by the year's earnings.

* * *

Respectfully submitted on behalf of the Board of Directors,

DAVID A. CRAWFORD, *President*

March 15, 1940

[Advertisement]

THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

New York, February 20, 1940.

To the Stockholders of
The Delaware, Lackawanna and
Western Railroad Company:

The results from operation of the property of your Company for the calendar years 1939 and 1938 in condensed form show:

	1939	1938
Revenues from Freight Transportation	$38,336,144	$32,025,303
Revenues from Passenger Transportation	6,649,041	6,730,876
Revenues from Miscellaneous Services	5,469,253	5,432,302
Total Revenues	$50,454,438	$44,188,481
Cost of Operation and Maintenance:		
Payrolls	$25,374,185	$23,957,737
Fuel—coal, oil and electric power	4,916,974	4,546,461
Materials and supplies, etc., (incl. sales taxes)	4,972,863	4,157,419
Miscellaneous charges, including loss and damage and personal injuries	802,261	871,784
Total Cost of Operation and Maintenance	$36,066,283	$33,533,401
Balance from Railroad Operations	$14,388,155	$10,655,080
Federal, State and Local Taxes:		
Unemployment Insurance Tax	$754,728	$703,197
Railroad Retirement Tax	698,910	658,599
All other taxes	3,686,863	3,762,384
*Total Taxes	$5,140,501	$5,124,180
Leaving a balance of	$9,247,654	$5,530,900
Paid to other companies for hire of equipment and use of joint facilities, less amount received from those sources	750,242	531,770
Income from Railway Operations	$8,497,412	$4,999,130
Other income received from investment in stocks and bonds and miscellaneous items	1,181,260	1,150,115
Total income	$9,678,672	$6,149,245
Interest paid on funded debt	$220,440	$162,360
Interest paid on bonds of leased lines	3,954,655	3,954,670
Guaranteed dividends paid on stock of leased lines	3,128,601	3,128,601
Rental of 4 freight piers and 3 passenger ferry terminals—New York City	415,237	369,059
Total	$7,718,933	$7,614,690
Net income before depreciation charges	$1,959,739	*$1,465,445*
Depreciation charges	2,468,724	2,489,509
Resulting in a deficit of	$508,985	$3,954,954
*Amount of taxes per share of stock outstanding	$3.04	$3.03

The moderate improvement in traffic that began late in 1938 continued into 1939 and, following the outbreak of the European war on September 1st, was more pronounced during the last four months thereof. Although the Company failed fully to earn its fixed charges for the year, the improvement in business is reflected in the substantial reduction in the deficit for the year 1939 as compared with the previous year. From the standpoint of gross revenues, the year 1939 was the best since 1931.

Rates and Fares

No general changes in freight rates or passenger fares occurred during the year. Effective June 30th, 1939, the Interstate Commerce Commission granted the application of Eastern railroads to reduce round-trip fares in varying amounts according to distance travelled. At the end of the year, there was pending before the Commission an application of the Eastern railroads to extend for period of nine months the 2.5 cent per mile coach fare which was to have terminated on January 24th, 1940. (By its order dated February 15th, 1940, the Commission established a maximum rate of 2 cents per mile effective March 24th, 1940.)

Revenues

Gross revenues were $50,454,438, an increase of $6,265,957, or 14.2 per cent. Freight revenue, which comprises by far the largest source of the Company's earnings, increased from $32,025,303 in 1938 to $38,336,144, a difference of $6,310,841, or 19.7 per cent. Taking the first eight months of 1939 as a unit, and the last four months separately, the relative increases in freight revenue from the corresponding periods of 1938 were as follows:

First eight months	17.1 per cent
Last four months	24.4 per cent

Passenger revenue was $6,649,041, a reduction of $81,835, or 1.2 per cent. During the period of the New York World's Fair, from April 30th to October 31st, there was an increase in passenger revenue of $31,094, but during the other six months of the year the decline was $112,929. The receipts from mail, express, switching and other miscellaneous sources showed increases, but milk revenue was $109,329 less than in the previous year. The gradual decline in milk revenue over the past few years has been due in large part to truck competition and to rate reductions put into effect to meet such competition.

Maintenance and Operation

Expenditures for maintenance of way and structures and of equipment for the year amounted to $12,711,378, an increase of $1,428,643, or 12.7 per cent, and constituted 25.2 per cent of total operating revenues as compared with 25.5 per cent for the previous year. Maintenance charges included $2,429,424 for depreciation of equipment. The number of unserviceable freight cars was reduced to 6.85 per cent of total freight cars owned at the end of the year.

There were laid in replacement 6,468 tons of new 131 lb. rail, 81,592 treated cross ties, and 128,000 tons of rock ballast.

The Company enters a year that promises greater demands on its facilities than have been experienced in any year since 1929. The extent of expenditures for repairs and renewals in the past has made it possible to keep pace with increased traffic, and your Company is fully able to meet the demands for improved service.

Transportation expenses aggregated $22,762,395, an increase of $946,931, or 4.3 per cent, and took 45.1 per cent of total operating revenues, as compared with 49.4 per cent for last year. The increase in transportation expenses was only 15.1 per cent of the increase in revenues. The volume of freight traffic as measured by revenue ton-miles increased 21 per cent, while the passenger traffic unit reduced 1.6 per cent.

The cost of fuel increased 9.2 per cent over the previous year, due in part to the larger volume of traffic and also to the suspension of operations in the bituminous coal fields in April and May, as a result of which your Company consumed larger quantities of anthracite coal for fuel purposes. However, in spite of these difficulties, the coal consumption to move one thousand gross ton-miles was reduced to 130 lbs., the lowest in the history of the Company.

Acting under the authority of the Bituminous Coal Act of 1937, the Bituminous Coal Division of the Department of the Interior has held a long series of hearings which will eventually lead to the establishment of minimum coal prices. These hearings were still in progress at the close of 1939. Your Company purchases over 70 per cent of its bituminous coal supply from a wholly owned and controlled subsidiary, and it is expected that such coal will be exempt from the minimum coal prices.

The Pennsylvania Full Crew Law, enacted in 1937 and requiring an additional brakeman on five-car passenger and fifty-car freight trains, was declared unconstitutional on March 15th, 1939 by the Dauphin County Court as a violation of both the State and Federal constitutions. The Pennsylvania Supreme Court, in a unanimous opinion, upheld the decision of the lower court.

Payments for loss and damage to shipments in transit were less than those of the previous year by $20,412. The ratio of loss and damage to gross freight revenue of 1939 was .48 per cent, compared with .63 per cent in 1938.

The increase of $129,645 in General Expenses was caused principally by the assumption of pro-rata costs in connection with the railroad exhibit at the New York World's Fair. Your Company's proportion of assessments, as well as other expenses incurred in exhibiting two of its locomotives and other equipment at the Fair, was $74,061.

During the year, your Company charged to its operating expenses for premiums on employes group insurance, and on

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account of hospitalization and Railroad Y. M. C. A.'s for employes, the sum of $114,484.

Taxes

Taxes accrued during the year aggregated $5,140,501, an increase of $16,321 over the previous year. As indicated on page 15, taxes absorbed 10.19 cents of each dollar of gross revenue as compared with 11.60 cents in the preceding year. In relation to outstanding capital stock, taxes equalled $3.04 per share in 1939 and $3.03 in 1938.

Taxes in 1939 included $754,728 payroll tax for unemployment compensation, and a further payroll tax of $698,910 under the Railroad Retirement Act, making the total payroll tax for the year $1,453,638, an increase of $91,842. The tax paid under the Railroad Retirement Act has very largely replaced the pension payments formerly made by the Company. The remaining taxes of $3,686,863 cover property and other taxes which, in the aggregate, were $75,521 under the year 1938.

An agreement was reached during the year for the settlement of the balance of $1,631,929 for 1933 New Jersey State taxes, exclusive of interest, by the initial payment of $1,000,000 and further payments of $631,929 during the first six months of 1940. The Federal District Court has held that the taxes assessed for the years 1934, 1935 and 1936 were basically unsound and grossly excessive, and has enjoined the collection of more than 70 per cent of the taxes assessed for those years pending a revaluation of the railroad property by the taxing authorities in conformance with the Court's decision. The principles of that decision are equally applicable to the taxes for later years. The amount of additional tax to be paid for the years 1934, 1935 and 1936 in order to bring the total payments up to 70 per cent of the taxes assessed in accordance with the Court's decision is $708,890.

Additions and Betterments

The total charges for additions and betterments aggregated $1,599,652, against which there were credits for property retired of $2,612,809, resulting in a net decrease for the year of $1,013,157 in investment in transportation property.

Three hundred and fifty hopper coal cars and one hundred gondola cars were equipped with cast steel truck sides, new bolsters and brake beam supports, in replacement of arch bar trucks, to permit interchange with other railroads under rules of the Association of American Railroads effective January 1st, 1940.

One modern all steel dining car and one modern all steel buffet car were built in the Company's shops to meet the demands of the traveling public.

The Industrial Department reports the location of 54 new industries at points served by your Company. New tracks or extensions to existing tracks were constructed to serve industries located at Jersey City, Harrison, Passaic and Little Falls, N. J., and Buffalo, Sherburne and Syracuse, N. Y.

Financial

All addition and betterment expenditures were financed from current cash and no temporary loans were incurred during the year. In addition, the Company paid $1,000,000 of back taxes in the State of New Jersey, as hereinbefore explained.

Payments aggregating $518,150 on equipment trust certificates and on locomotive purchase contracts were made during the year. In addition, stocks and bonds of leased lines in the amount of $80,150 par value were purchased, reducing the annual rental by $3,841. Since 1930, your Company has expended $1,313,753 in the purchase of leased line securities, effecting a reduction in annual rental of $87,897.

While all of the above-mentioned expenditures were financed from current cash, the Cash Account of the Company at the end of the year was $543,560 over what it was at the beginning of the year.

The President and Managers again record their appreciation of the loyal and efficient cooperation of the officers and employes in the conduct of the Company's business and affairs throughout the year.

By order of the Board of Managers.

J. M. DAVIS, President.

[Advertisement]

News

(*Continued from page 561*)

jected into the dispute of late,—the principal one being that lots of industries have left the state and a lot more will leave if the prohibition against tolls is removed.

Mr. Horning, in his memorandum replies that in fact industries have left New York principally because of an ever-increasing tax burden. As an illustration, he points out that the per capita cost of state and local government in New York for 1937 amounted to $121, whereas it was $64 in Pennsylvania, $65 in Ohio and an average of $66 for all the states except New York. Furthermore, says Mr. Horning, business not served by the canal must now help pay the bill; and, after all "if in fact the canal means so much to certain interests, may we not well ask them how they get along without it when it is frozen over and not in use for months each year?"

1939 Grade-Crossing Fatalities Less Than Any Year's Since 1915

Fatalities resulting from accidents at highway-railroad grade crossings were less in 1939 than in any year since 1915, according to the Safety Section of the Association of American Railroads. Fatalities resulting from highway-railroad grade crossing accidents in 1939 totaled 1,398, a decrease of 119 compared with 1938 and a decrease of 477 compared with 1937. The number of fatalities in 1939 was a reduction of 1,170 compared with the peak year in 1928, when 2,568 persons lost their lives in such accidents.

The reduction in the number of fatalities took place despite an increase in the number of automobiles in operation over the highways of this country. For every person killed in a grade crossing accident in 1939, there were approximately 21,100 automobiles registered, compared with 19,400 automobiles per fatality in 1938 and 2,500 in 1916. Had the ratio of fatalities in grade crossing accidents been the same in 1939 as in 1916, the number of deaths in the past year would have been approximately 11,800 compared with 1,398, the actual number which did occur.

Persons injured in highway-railroad grade crossing accidents in 1939 totaled 3,999, a decrease of 19 compared with the preceding year and a decrease of 1,137 persons compared with 1937. The number of persons injured in 1939 was less than in any preceding year since 1933. In 1939 there were 3,476 grade crossing accidents, a decrease of seventeen compared with 1938, and a decrease of 1,013 compared with 1937.

"The reduction that has taken place in the number of fatalities resulting from accidents at highway-railroad grade crossings" the A. A. R. statement says, "has been due in part, at least, to the intensive campaigns which the railroads and various safety organizations have conducted in the past 20 years in an effort to induce the public to exercise greater precaution in passing over highway-grade crossings. With the growing increase in the number of automobiles in operation, this campaign has been particularly active in recent years with the result that since 1928, when the number of fatalities resulting from such accidents was the greatest on record, a considerable reduction, about 45 per cent, has been brought about."

New Board Appointed Following Mexican Collisions

A new board of administration of the Mexican Union of Railroad Workers which operates the National Railways of Mexico has been appointed following two train collisions in which a number of passengers and employees were killed and injured. The new board consists of Juan Gutierrez, chairman; I. R. Malpico, assistant passenger traffic manager; Bernardo E. Arias, superintendent of the telegraph and electrical department; Jose R. Gamez, general accountant; Luis Reina, assistant chief engineer; Jose M. Sanchez, chief of standards and rules; and Juan C. Garcia, general superintendent of transportation.

The first accident occurred on February 25, when a passenger train ran into a freight train between Queretaro and Las Adjuntas as a result of the wrong interpretation of orders by the operator of Mariscala. Nine passengers and 5 employees were killed and 36 passengers and 8 employees were injured. Disciplinary action was taken.

The second accident occurred on March

9, when two passenger trains collided between Santa Catarina and Anona as a result of another misinterpretation of orders, this time by the operator at Tomellin. Two employees were killed and two passengers and eight employees were injured. Following this accident the president of the Republic requested the resignation of the entire board.

Senate Will Get Rivers and Harbors Bill After All

Disregarding the advice of President Roosevelt, the Senate committee on commerce this week decided to report a rivers and harbors authorization bill to be framed after conferences with the army engineers who are being asked to specify "less urgent" projects which might be deferred. This action of the committee is also contrary to the prediction of Chairman Bailey who told the National Rivers and Harbors Congress last week that there was little likelihood of enactment at this session of a rivers and harbors authorizations bill.

Previous maneuvers of the Senate committee in connection with the rivers and harbors bill, H. R. 6264, have been reported in recent issues of *Railway Age*. That bill passed the House with authorizations totaling $83,000,000 and came from the Senate committee as a $412,000,000 measure. Efforts to trim the latter after its recommittal brought forth the idea of seeking the President's advice, and the results of the committee delegation's visit to the White House were reported in last week's issue, page 526.

Announcing the latest action of the committee after a March 19 meeting, Chairman Bailey said it had been decided that there should be a navigation bill. He went on to say that members of the committee have been under some pressure for action, and that they saw no reason why there shouldn't be an authorization bill which carried no appropriation. As now drafted the navigation bill would authorize projects estimated to cost more than $200,000,000; and it is this figure which the committee hopes to cut when it gets advice from the army engineers as to the "less urgent" works.

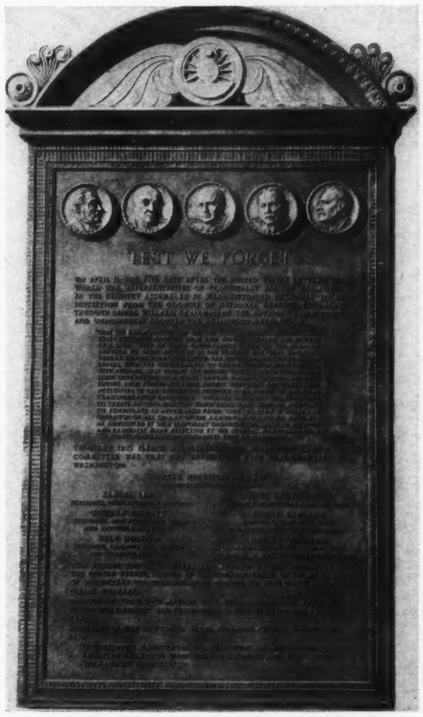
R. R. War Memorial in Washington Station

On April 26, the Association of American Railroads will dedicate a bronze tablet in the Union Station at Washington, D. C., in commemoration of the patriotic co-operation of the American railroads with the government in organizing for the national defense in 1917 and the services of the Railroad War Board during that year.

The dedication ceremony will take place at a luncheon in the dining room of the Union Station, during which a replica of the bronze tablet will be unveiled. The tablet will occupy a permanent position on an interior wall of the station.

The program for the unveiling will include an address by Daniel Willard, who will describe the conditions leading to the formation of the Board, and its accomplishments during 1917, when he was chairman of the Advisory Commission of the Council of National Defense; and an address by a representative of the government, who will discuss present-day aspects of the relations between national defense and the mass transportation services of the railroads.

The tablet commemorates the declaration



on April 11, 1917, of the railroads' unanimous support of the government's war effort and reproduces the resolution adopted to that effect. It carries the names of the Railroad War Board—Fairfax Harrison; Samuel Rea, Howard Elliott, Hale Holden, Julius Kruttschnitt, E. E. Clark and Daniel Willard.

Railroads in 1939 Had Best Safety Record in History

Railroads of the United States in 1939 had the best general safety record in their history, surpassing the previous record made in 1938, J. J. Pelley, President of the Association of American Railroads announced on March 21. Fewer persons lost their lives in railroad accidents last year than in any year since the Interstate Commerce Commission began the compilation of these reports in 1888.

In the field of passenger safety, 13 persons lost their lives in train accidents in 1939, compared with 52 in 1938. Of the 13 passenger fatalities in train accidents in the past year, 9 occurred in one accident which, according to an investigation by the Interstate Commerce Commission, was caused by sabotage. Out of the 52 fatalities in 1938, 40 resulted from one accident, for which a cloudburst was responsible.

Fourteen passengers were fatally injured in train-service accidents in 1939, compared with 17 such fatalities in 1938. Train-service accidents to passengers consist, for the most part, of accidents in getting on or off moving trains.

Fewer employees were killed and injured, as compared with the number of hours worked, than ever before. As compared with the previous record year of 1938, the decline in the fatality rate among employees was 2.6 per cent, and in the injury rate it was 2 per cent.

Fatalities to trespassers on railroad property numbered 2,294 in 1939, four less than in 1938. As noted elsewhere in this issue, fatalities resulting from accidents at highway-railroad grade crossings were less in 1939 than in any year since 1915. Trespasser and grade crossing fatalities combined represented 86 per cent of all fatalities connected with the railroads in 1939.

Freight Car Loading

Revenue freight car loading for the week ended March 16 totaled 618,985 cars, the Association of American Railroads announced on March 21. This was a decrease of 2,012 cars, or 0.3 per cent, below the preceding week but an increase of 27,819 cars, or 4.7 per cent, above the corresponding week last year and an increase of 78,620 cars, or 14.5 per cent, above the comparable 1938 week.

As reported in last week's issue, loading of revenue freight for the week ended Saturday, March 9, totaled 620,997 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, March 9

Districts	1940	1939	1938
Eastern	137,112	131,786	121,150
Allegheny	128,258	116,527	103,965
Pocahontas	44,390	39,526	37,807
Southern	99,269	94,032	92,283
Northwestern	72,803	69,594	66,129
Central Western	93,260	92,055	89,656
Southwestern	45,905	44,906	45,740
Total Western Districts	211,968	206,555	201,525
Total All Roads	620,997	588,426	556,730
Commodities			
Grain and grain products	30,548	31,211	31,429
Live stock	10,972	10,175	10,954
Coal	123,329	114,998	105,274
Coke	8,964	6,965	5,127
Forest products	31,564	25,951	27,613
Ore	10,368	7,527	8,722
Merchandise l.c.l.	149,291	152,408	150,694
Miscellaneous	255,961	239,191	216,917
March 9	620,997	588,426	556,730
March 2	634,410	594,424	552,892
February 24	595,032	556,742	511,939
February 17	607,924	576,645	535,866
February 10	626,903	576,352	542,991
Cumulative Total, 10 Weeks	6,297,685	5,754,446	5,521,875

In Canada.—Carloadings for the week ended March 9 totaled 47,438 as against 48,348 in the previous week, but the increase over last year was 5,674—according to the statement of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
March 9, 1940	47,438	25,293
March 2, 1940	48,348	25,116
February 24, 1940	46,475	23,941
March 11, 1939	41,764	21,483
Cumulative Totals for Canada:		
March 9, 1940	472,928	241,162
March 11, 1939	400,774	211,542
March 12, 1938	451,601	220,485

Hearing Held on N. Y., O. & W. Plan

The present debtor's plan of reorganization for the New York, Ontario & Western is not a feasible one at this time and no reorganization of the road should be attempted now, according to testimony

given the Interstate Commerce Commission on March 19 by witnesses for the debtor, bondholders, and the trustee. E. G. Buckland, president of the road, which is undergoing reorganization under section 77 of the Bankruptcy Act, told the commission that a successful reorganization cannot be carried out at this time on the basis of present earnings. He counseled the commission to wait and see what the trustee, F. E. Lyford, can do towards rehabilitating the property.

Mr. Lyford, who testified briefly, said that the present debtor's plan is "not a workable one" and should not be put into effect. He described his efforts to attract to the road other types of traffic than anthracite coal, which has made up the bulk of the line's freight. He went on to point out that plans are now receiving favorable consideration, which, if consummated, would greatly increase the shipments of milk on the railroad. Asked whether the road was in good physical shape and capable of handling an increased amount of traffic, the trustee assured the commission that such was the case. He was hopeful that the traffic on the road would increase as a result of his efforts in this regard.

The only other witness who testified was W. F. Mathieson, general auditor of the road, who presented several statistical exhibits to show the present financial condition of the road. Henry J. Friendly, counsel for the bondholders' committee, told the commission that he agreed with the testimony of Mr. Buckland and Mr. Lyford to the effect that no reorganization should be attempted at this time.

Caskie to Leave I. C. C. on April 1

(*Continued from page 558*)

done and wish you great happiness and success in the private business to which you plan to return."

"Of course we rejoice in the fine opportunity in private business which he is to have and congratulate his new employers," Mr. Eastman went on. "Commissioner Caskie is by experience and personality unusually well fitted for the work of the commission and he has fully met the expectations which were accordingly entertained at the time of his appointment by all who knew him. He was a major factor in the reorganization of the commission which became effective last July, and his unselfish disregard at that time of his own personal interest was the outstanding feature of the change. We shall miss him sorely, and I most of all. He and I have been closely associated for the past seven years, and that association has been a source of constant pleasure to me."

In the above reference to Commissioner Caskie's part in bringing about last year's reorganization of the commission, Chairman Eastman was recalling how Mr. Caskie, the last chairman to serve under the former plan of rotating that job annually on the basis of seniority, had voluntarily curtailed his chairmanship by six months and refused to be considered for the enlarged three-year term. As noted in the *Railway Age* of June 17, 1939, page 1025, the revamping of the commission remains as the landmark of Commissioner Caskie's curtailed chairmanship.

Mr. Caskie was appointed to the commission by President Roosevelt on August 16, 1935, and the appointment was promptly confirmed by the Senate four days later—on August 20, 1935. He succeeded Patrick J. Farrell whose term had expired on December 31, 1934. Mr. Caskie had been southern regional traffic assistant to Chairman Eastman when the latter was federal co-ordinator of transportation; and Mr. Eastman recommended him for the commissionership. Born in Virginia, July 29, 1890, Mr. Caskie was educated at the Fort Union Military Academy. From 1906 until 1910 he was in the service of the Southern Railway, and from 1910 until 1917 he was engaged in private practice as a commerce counsel.

In 1917 Mr. Caskie became general manager of the Montgomery (Ala.) Chamber of Commerce's Traffic Bureau and remained in that position until 1929, serving at the same time as traffic manager of the Alabama Farm Bureau Federation and other associations. Meanwhile, also during the 'Twenties, he was at various times executive secretary, president and chairman of the board of the Southern Traffic League and regional vice-president of the National Industrial Traffic League. As noted above he was previously associated with the Reynolds Metal Company in 1930-31—that time as assistant to the vice-president and assistant to the president of the affiliated Stokeley Brothers Company. During 1931 Mr. Caskie became general manager for the state of Alabama of its ocean and rail terminal at Mobile and general manager of the Terminal Railway of the Alabama State Docks. In 1933 he was appointed regional traffic assistant to Co-ordinator Eastman, a position which he held until 1935 when he became associated with the Waterman steamship interests. He had served in the latter connection only a few weeks when he was appointed to the commission.

1940 "Perfect Shipping" Campaign Gives Great Promise

Elaborate plans to make this year's "perfect shipping" and careful handling campaign the most successful of any conducted thus far have been completed by shippers and the railroads and will be in full operation in April, the perfect shipping and careful handling month. Under the sponsorship of the National Association of Shippers Advisory Boards, with railroads and express companies co-operating, the first April, perfect shipping and careful handling month was conducted in 1937 for the purpose of ascertaining and removing the causes contributing to loss and damage so that shipments may be sold to customers "at a profit" rather than to the railroads "at cost," and thus avert the large economic waste involved in loss and damage. Those first efforts were so successful that the spirit of the campaign expended itself throughout the year and concentration upon perfect shipping and careful handling in April has become an annual event.

This year W. J. Williamson, general traffic manager of Sears, Roebuck & Company, Chicago, is general chairman of the national management committee, which consists of committee chairmen of the 13 regional advisory boards. Co-operating with this committee are the individual railroads, express companies, the Association of American Railroads, the U. S. Department of Commerce, the National Industrial Traffic League, National trade associations, traffic clubs, chambers of commerce and other commercial organizations.

The magnitude of this year's campaign is also indicated by the fact that more than 500,000 pieces of printed matter have been prepared and are being distributed among railroads and shippers to "make shipments safe for transportation and transportation safe for shipments." In addition, more than 400 speakers are scheduled to address railroad employees and shippers.

An innovation this year is a sound-film, On Guard, which tells a dramatic story of how railroads and shippers have worked together to cut freight loss and damage 85 per cent in 20 years. One hundred of these vocal-films have been made and will be shown at gatherings of shippers and railroad employees. Each contains 130 pictures and requires 20 minutes for presentation. Mr. Williamson is one of the "actors" in the film, as are shippers and railroad employees.

Bailey Cautions Waterways Fans

(*Continued from page 557*)

night, it pays for the privilege. You cannot continue to spend money without demanding taxes. This idea that the other fellow is going to pay the taxes is perfectly absurd."

After Senator Bailey had concluded his remarks and Mr. Driver had told the members that they should consider his words "very seriously," Chester C. Thompson, president of the Inland Waterways Corporation, came to the defense of the aims of the Congress by stating that he had never heard of it recommending an "unworthy project."

Representative Short, Republican of Missouri, was re-elected president of the Congress, while other officers named were: William J. Driver, chairman of the board of directors; Representative Secrest, Democrat of Ohio, vice chairman of the board; Fred Beneke, secretary-treasurer; and William H. Webb, executive vice president.

Resolutions calling for continued and extended river and harbor, flood control, irrigation and reclamation work were adopted by the Congress.

"We recommend," stated one resolution, "the passage of a new river and harbor bill at the present session of Congress, to include the authorization of complete projects, to approve plans and make authorizations for comprehensive long range projects and to authorize necessary preliminary investigations and surveys. This legislation is urged in order that the inland water transportation system, so valuable to Na-

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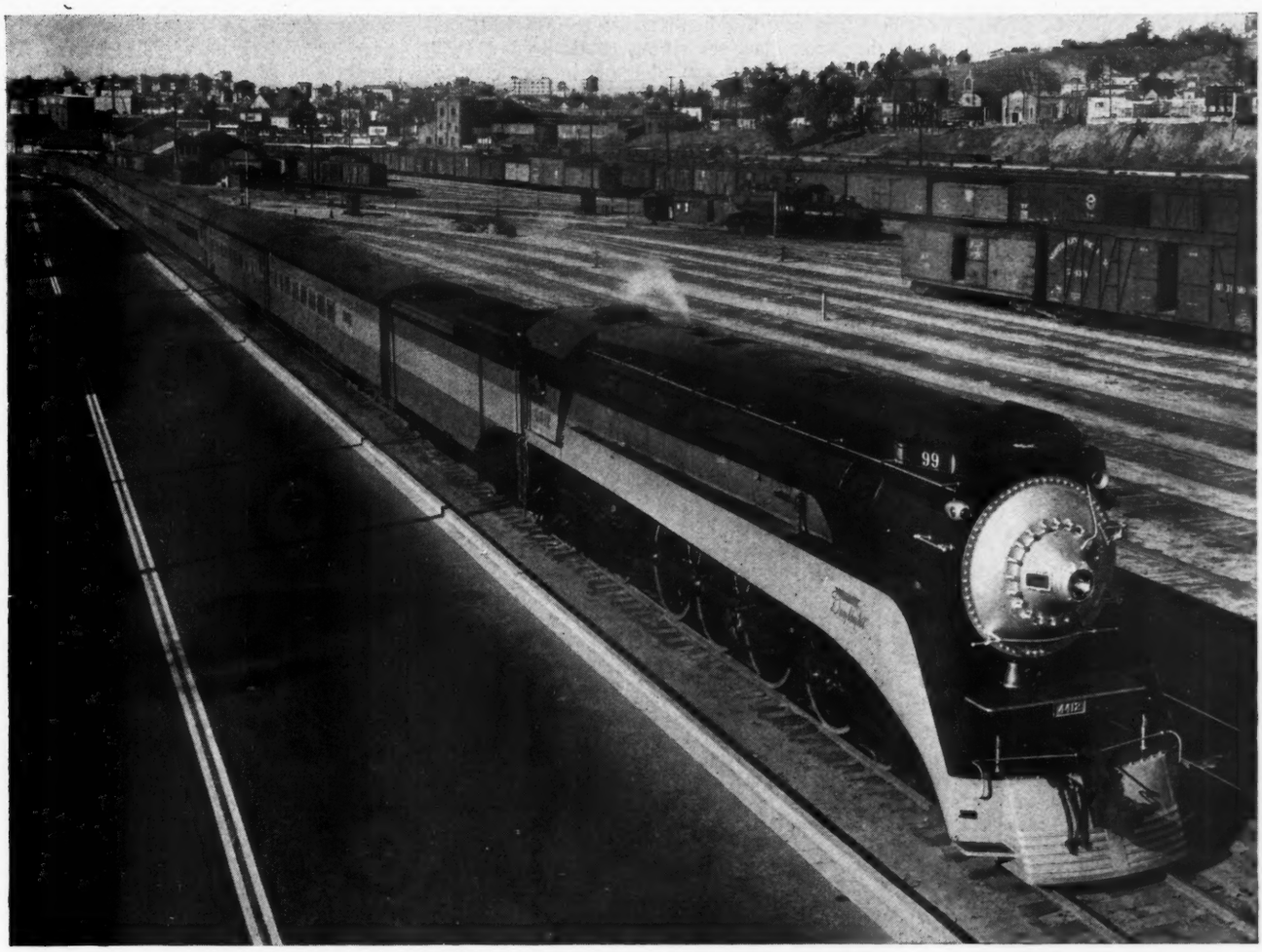

CONVERT

HIGHWAY PASSENGERS to RAILROAD PASSENGERS

The progressive railroads that have inaugurated streamlined trains have discovered that the majority of the increased patronage is from people who formerly travelled the highways.

Install modern streamlined steam motive power, such as Lima is building for the progressive railroads, and realize your share of this potential revenue increase.

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tional Defense, may be properly safeguarded and strengthened in accordance with the proclamation of the President of the United States. We likewise favor the passage of a new flood control authorization bill."

Other resolutions of the Congress called for inclusion in river and harbor bills of arrangements for studies and surveys of beaches and shores; that Congress assure ample annual appropriations to advance construction of authorized projects for rivers and harbors improvements; that all planning and execution of public improvements of water resources for navigation, flood control and allied purposes continue in the War Department as a function of the Corps of Army Engineers; that where plans call for development of hydro-electric power in connection with the construction of a dam for flood control, the planning and execution shall be under the jurisdiction of the agency responsible for the project and the power to be turned over at the switchboard to a suitable federal agency such as the Federal Power Commission for distribution and sale; that irrigation work should continue under the Interior Department; that soil conservation and reforestation should continue under the Department of Agriculture; that waterway improvements be pressed as a national defense measure; that free navigable waterways be deemed public highways and remain free; that the Wheeler-Lea bill be defeated; that water project expenditures be recorded in the Government books as capital investments and that due to the fact that Canada is at war action on the St. Lawrence Waterway be deferred pending further study.

The projects committee reported that it had examined 62 projects, including navigation, harbor works, flood control, soil erosion, prevention of stream pollution, reclamation and water conservation. Of this number the committee recommended that 18 projects are "sound, needful and sufficiently advanced in status to warrant endorsement; involving a total estimated cost of $86,155,150." Nineteen projects were reported to be without a sufficiently advanced status to warrant present endorsement, but were "believed to be meritorious and entitled to further consideration by the committee."

Prior to the committee reports the delegates heard Representative Culkin, Republican of New York, say that the passage of the Wheeler-Lea bill would be disastrous to the waterways. "It is proposed," said Mr. Culkin, "to turn the waterways over to the tender mercies of the Interstate Commerce Commission, a railroad-minded body which bitter experience has shown is not concerned with the transportation of the farmer or the industrialist." The I. C. C. has not regulated the railroads, but the railroads have regulated the I. C. C., asserted the New York Representative.

Denouncing the hearings on the bill in the Senate, Mr. Culkin declared that "The majority of the Senate committee led by that vigorous gentleman, Senator Wheeler, assumed the role of prosecutors and any proponent or defender of the waterways that appeared was manhandled in a fashion which would not be permitted in a police court. Senate committee hearings reached a new low in these proceedings with railroad lawyers sitting cheek by jowl with their Senatorial advocates in the committee room. Unfounded and unsound railroad propaganda was dignified as facts and the whole performance was a burlesque on orderly procedure." He closed his remarks by urging the delegates to assist in defeating "this iniquitous measure."

Smooth Handling of Export Traffic Continued in February

Export freight handled in February through Atlantic and Gulf ports was appreciably greater than in the same month last year, according to the Association of American Railroads. Despite the increase that has taken place in recent months in export traffic, the movement by rail to those ports "is being handled without congestion or delay, due largely to the cooperation of steamship owners, port authorities, shippers, and exporters in the prompt handling of shipments for export."

At Boston, Mass., 513 cars of grain were unloaded for export in February this year, compared with 186 cars in the same month last year; at Philadelphia, Pa., there were 1,196 cars compared with 357; at Baltimore, Md., 2,720 cars compared with 312; and at Norfolk, Va., 214 cars compared with 46 cars. This was practically all Canadian wheat. Grain export through New Orleans, La., was practically the same in volume as one year ago, there having been 211 cars in February of this year, compared with 209 in February, 1939. At Lake Charles, La., 67 cars of grain were handled, compared with 44 in February last year. There was very little grain moved through the five principal Texas ports, Beaumont, Galveston, Houston, Port Arthur and Texas City, in February this year, the total being 167 cars, compared with 1,969 cars in February, 1939. At the port of New York, 1,027 cars of grain were unloaded for export in February this year. This was a substantial increase compared with the same month last year, although the exact figures for February, 1939, are not available.

At the port of New York, the number of cars of other export traffic unloaded for lighterage in February averaged 847 daily, or an increase of 3 per cent compared with the preceding month. Tons of east-bound freight, of which from 85 to 90 per cent is for export, lightered in February, totaled 550,611 tons compared with 552,975 tons in January, 1940, and 278,596 tons in February, 1939. This was a decrease of four-tenths of one per cent below January, 1940, but an increase of 97.6 per cent above February last year. That no congestion exists at the port of New York is shown by the fact that only approximately one-third of the railroads' storage space is now being utilized.

At Philadelphia 1,971 cars of freight, other than grain, were unloaded for export in February, compared with 876 cars in February, 1939, or an increase of 125 per cent. The number of cars of coastwise and intercoastal freight unloaded in February this year was approximately 6 per cent above one year ago. Cars of export freight, other than grain, unloaded in Baltimore in February totaled 3,146 cars, compared with 1,594 cars in February last year, or an increase of 98 per cent. The number of cars of coastwise and intercoastal freight unloaded in that port showed a decrease of 17 per cent.

At Boston 816 cars of export freight, other than grain, were unloaded in February this year, compared with 650 cars in the same month last year, or an increase of 26 per cent. At Savannah, Ga., there was an increase of 37 per cent in the number of cars of export freight other than grain unloaded, the actual number of cars unloaded in February this year having been 631 cars, compared with 459 cars one year ago. An increase of 37 per cent in the amount of export freight unloaded in February at Port Everglades, Fla., and 40 per cent at Mobile, Ala., also took place, while at the Texas ports, there was an increase of 19 per cent.

Cotton continued to move in heavy volume at New Orleans, the receipts at that port in February this year having been 266,536 bales, compared with 44,438 bales in February last year. Total unloadings of export and coastwise freight at New Orleans were 6,513 cars in February this year, compared with 3,755 cars in February one year ago, or an increase of 73 per cent.

Missouri Pacific to Buy Terminals

The Missouri Pacific has contracted to purchase from Terminal Shares, Inc., an Allegheny Corporation subsidiary, for $7,050,000 the terminal company's properties at North Kansas City and the St. Joseph Belt and the Union Terminal. Under an original agreement providing for the payment of $20,334,264, the Missouri Pacific had paid Terminal Shares about $3,200,000 and including this sum will now obtain control of the terminal facilities for a total of $10,250,000. A petition asking approval of the compromise has been filed with the district court.

The settlement, subject also to approval of government regulatory bodies, sets a new price of $9,600,000 for the properties—$3,600,000 for all the stock of the two St. Joseph terminal companies and $6,000,000 for a two-thirds interest in the North Kansas City Bridge & Railway Company and five affiliated corporations.

Terms of the agreement provide for dismissal of seven suits filed by the Missouri Pacific and purchase of the St. Joseph Terminals stock for the $3,200,000 already paid and an additional $400,000. This would be $2,881,939 less than the original price of $6,481,939.

Carrying out these terms would complete the settlement, but in addition, the Missouri Pacific would have the right to buy the two-thirds interest in the North Kansas City companies. The stipulated price of $6,000,000 is $7,852,325 less than the figure of $13,852,325 fixed in the original contracts.

The railroad would not exercise its purchase right, however, unless the Burlington, which owns the other one-third interest in the properties, would dismiss or lose a condemnation suit directed against the North Kansas City Bridge & Railway Company.

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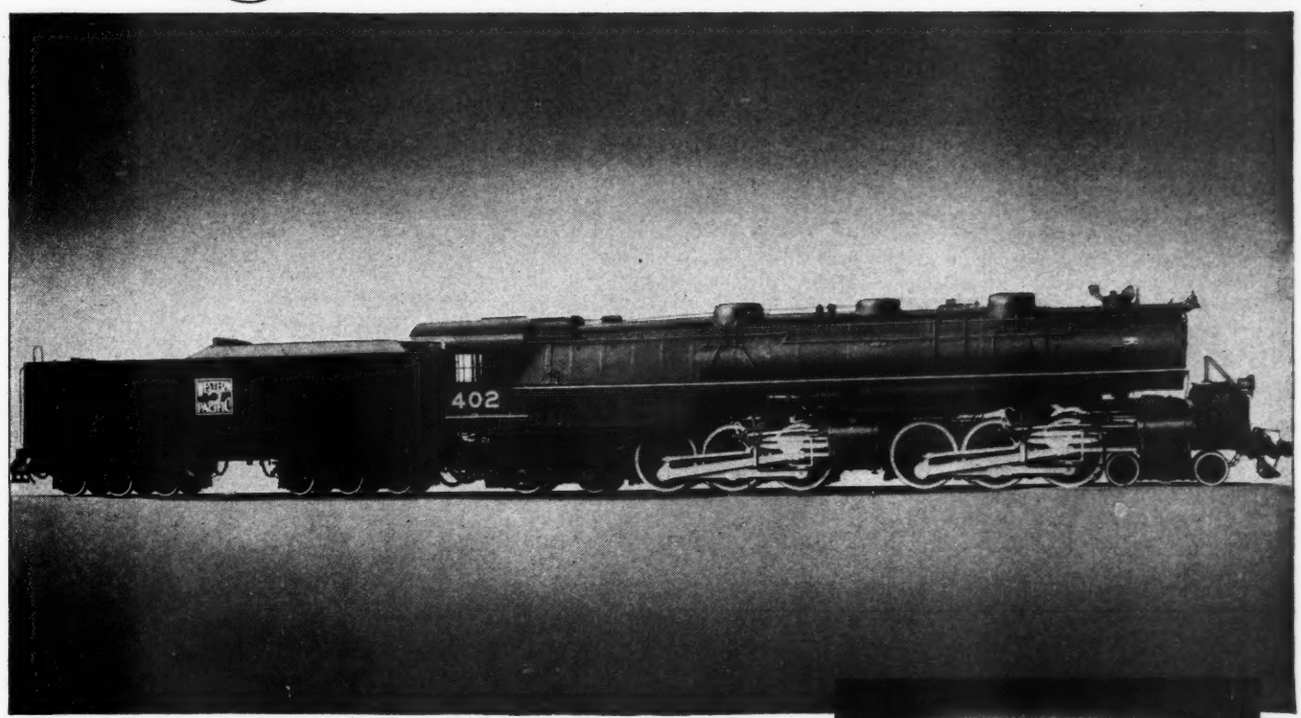
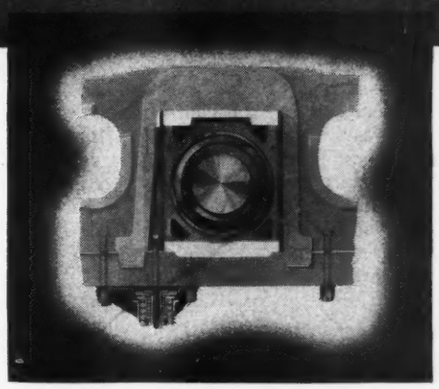
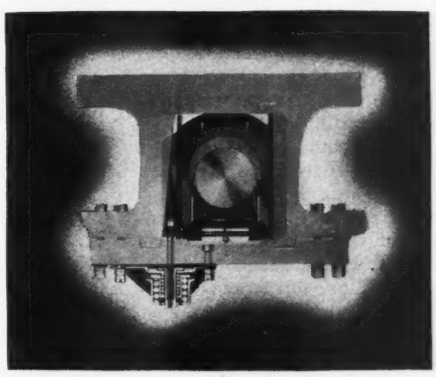
Protect your mallets...



...WITH FRANKLIN AUTOMATIC COMPENSATORS AND SNUBBERS

Mallets, because of the large number of drivers, formerly meant multiplied troubles because of improperly adjusted driving box wedges. This condition no longer bothers the progressive railroads as they now keep their wedges adjusted automatically and correctly . . . with Franklin Automatic Compensators and Snubbers. » » » The Automatic Compensator and Snubber maintains a constant accurate adjustment. It compensates for wear and for quick changes in temperature, which in many cases varies as much as 250 degrees in short periods of time. Slack & Pound are eliminated and the destructive effect of abnormal shocks is prevented. » » » Wedge adjustment worry is a thing of the past, even on Mallets. Our engineers will be glad to consult with you on applying Franklin Automatic Compensators and Snubbers to your new or old power.





ABOVE: Franklin Automatic Compensator and Snubber for Roller Bearing Driving Box application. BELOW: Franklin Automatic Compensator and Snubber for Friction Bearing Driving Box application.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK
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Supply Trade

Edward G. Budd Manufacturing Company Annual Report

The annual report of the Edward G. Budd Manufacturing Company for the year ended December 31, 1939, shows a net profit of $218,037, after deduction for all charges, compared with a net loss of $1,482,442 in 1938. It is pointed out that the volume of sales in the automobile body division was somewhat larger than in 1938 and that a substantial increase was reported in the number of lightweight, stainless-steel cars delivered to American railroads during the year. The operations of the Budd Wheel Company showed a profit of $662,834 for the year, compared with a loss of $460,670 for 1938.

In his report to stockholders of the parent company, Mr. Budd points out that the sum of $860,309 was expended in connection with the development and promotion of Hi-Tensile products. He anticipated also further growth of the company's railroad business as a result of an aggressive selling campaign for the so-called Budd sleeper-coach.

In his report for the wheel company, Mr. Budd pointed out that its disc type of railroad brake was installed on a limited number of railroad cars and its operation carefully observed during the year.

American Locomotive Company Annual Report

The annual report of the American Locomotive Company and subsidiary companies for the year ended December 31, 1939, shows a consolidated net loss for the year of $950,376, as compared with a consolidated net loss of $1,302,195 for 1938. Gross sales during 1939 amounted to $22,358,740, as compared with $24,272,076 in the preceding year.

The net loss item for 1939 makes provision for a decline in conversion value of net current assets of American's Canadian subsidiaries of $128,453.

The report appears in an entirely new form, replete with illustrations of products of the company and an airplane view of the Schenectady plant. In his report to stockholders, W. C. Dickerman, president, (recently succeeded by D. W. Frazer and himself elected chairman of the board) points out that the company has concentrated the manufacture of Diesel engines for railroad equipment under the direction of Gordon Lefebvre, manager, at Auburn, N. Y., and that the company has definitely entered the Diesel locomotive field. Unfilled orders of the entire company as of December 31, 1939 aggregating approximately $12,800,000, as compared with $6,700,000 one year preceding. The report stated "while at the present time there is a temporary slackening in business activity, there are many possibilities that indicate that 1940 may be a more active and profitable year for this company than the one just closed.

Harry N. Hayes, Chicago district sales manager of the **Coffing Hoist Company,** Danville, Ill., has been promoted to general sales manager, with headquarters at Danville.

George L. Gordon, in charge of the New York office of the **Lukens Steel Company,** has been transferred to the company's main office at Coatesville, Pa., and **J. J. Reynolds,** sales representative in the New York office for the past 13 years, has been appointed manager of sales at New York.

OBITUARY

David C. Jones, vice-president and general manager of The Lunkenheimer Company, Cincinnati, Ohio, died on March 11, after a brief illness. He was born at Cincinnati on November 14, 1876, and entered the employ of the Lunkenheimer Company in January, 1894. Mr. Jones also had served as president of the American Supply & Machinery Manufacturers' Association.

Equipment and Supplies

LOCOMOTIVES

THE UNITED FRUIT COMPANY is inquiring for four locomotives of the 2-8-2 type, for service in Central America.

FREIGHT CARS

THE LOUISVILLE & NASHVILLE is at present engaged at its South-Louisville, Ky. shops, on a modernization program converting 1,000 wooden-sided, single-sheathed box and automobile cars to all-steel box cars. The work of dismantling the old cars and building the new cars from the underframe up, which gives employment to 400 men, was begun in December, 1939, and is expected to be completed by April 1.

THE FRUIT GROWERS EXPRESS has just completed six special 50-ton flat cars each of which will transport two 3,000-gal. capacity milk tanks which were built by Glascote Products, Inc. These cars will be operated by the National Car Company, a subsidiary of the Fruit Growers Express, in conjunction with the National Fitch Corporation, who will transfer the milk tanks to highway trucks for Borden's Farm Products.

MOTOR VEHICLES

THE SANTA FE TRAIL TRANSPORTATION COMPANY has received delivery of four 37-passenger, parlor car type buses from the a.c.f. Motors Company.

THE CHICAGO, BURLINGTON & QUINCY has placed an order with General Motors Corporation for 15 air-conditioned Diesel-powered busses to be used by Burlington Trailways in regular service between Chicago, Denver, Colo., Salt Lake City, Utah, and points in California.

Construction

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—A contract amounting to $808,662 has been awarded Thomas McQueen, Forest Park, Ill., for the construction of the Central avenue viaduct in Chicago, extending over 50 tracks of the Milwaukee's Galewood Yards. A description of this structure was published on page 188 of the *Railway Age* of January 20.

NORTHERN PACIFIC.—A contract has been awarded the Ogle Construction Company, Chicago, for the construction of a three-track steel coaling station of the bucket hoist type at Custer, Mont. The project will cost approximately $27,000.

NORTHERN PACIFIC. — Reconstruction work will soon be started by company forces on the Yakima River bridge at Gibbon, Wash. This bridge consists of one 100-ft. and two 150-ft. deck Howe truss spans resting on pile and timber piers, with pile and timber approach spans. The work, which is estimated to cost $132,000, will consist of replacing the Howe truss spans with deck plate girder spans resting on concrete and steel piers.

TEXAS & PACIFIC.—This road is constructing a new dam near Baird, Tex., for water supply at that point, which will create a reservoir having a capacity of 393 acre ft. The work involves 75,000 cu. yd. of earth fill, 40,000 cu. yd. of rock and earth excavation for the spillway and the installation of automatic pumping equipment, which will consist of a submersible deep-well, electric pump operating within a collecting well in which the water level is controlled by float valves.

UNION PACIFIC and ATCHISON, TOPEKA & SANTA FE.—The Division of Highways of the State of California has awarded two contracts for grade separation structures for these railroads in connection with the Arroyo Seco Parkway in Los Angeles, Cal.

One contract, amounting to $118,695, has been awarded the Columbia Steel Company, Los Angeles, for the construction of the superstructure of a three-span, double-track railroad bridge over Arroyo Seco Parkway and channel. The superstructure will consist of three continuous steel girders with steel floor beams and alloy steel plates supported on concrete piers and abutments, which were previously constructed in connection with a W. P. A. project. The spans of this bridge will be approximately 67, 73 and 111 ft. in length.

A similar contract amounting to $135,700 has been awarded Oscar Oberg, Los Angeles, for two bridges over the Arroyo Seco Parkway, one a railroad bridge for the Union Pacific and the Santa Fe, and the other a highway grade separation bridge on Fremont avenue. The railroad bridge, which is located near Fremont avenue, will consist of two 68-ft. steel girder spans similar to the structure previously described.

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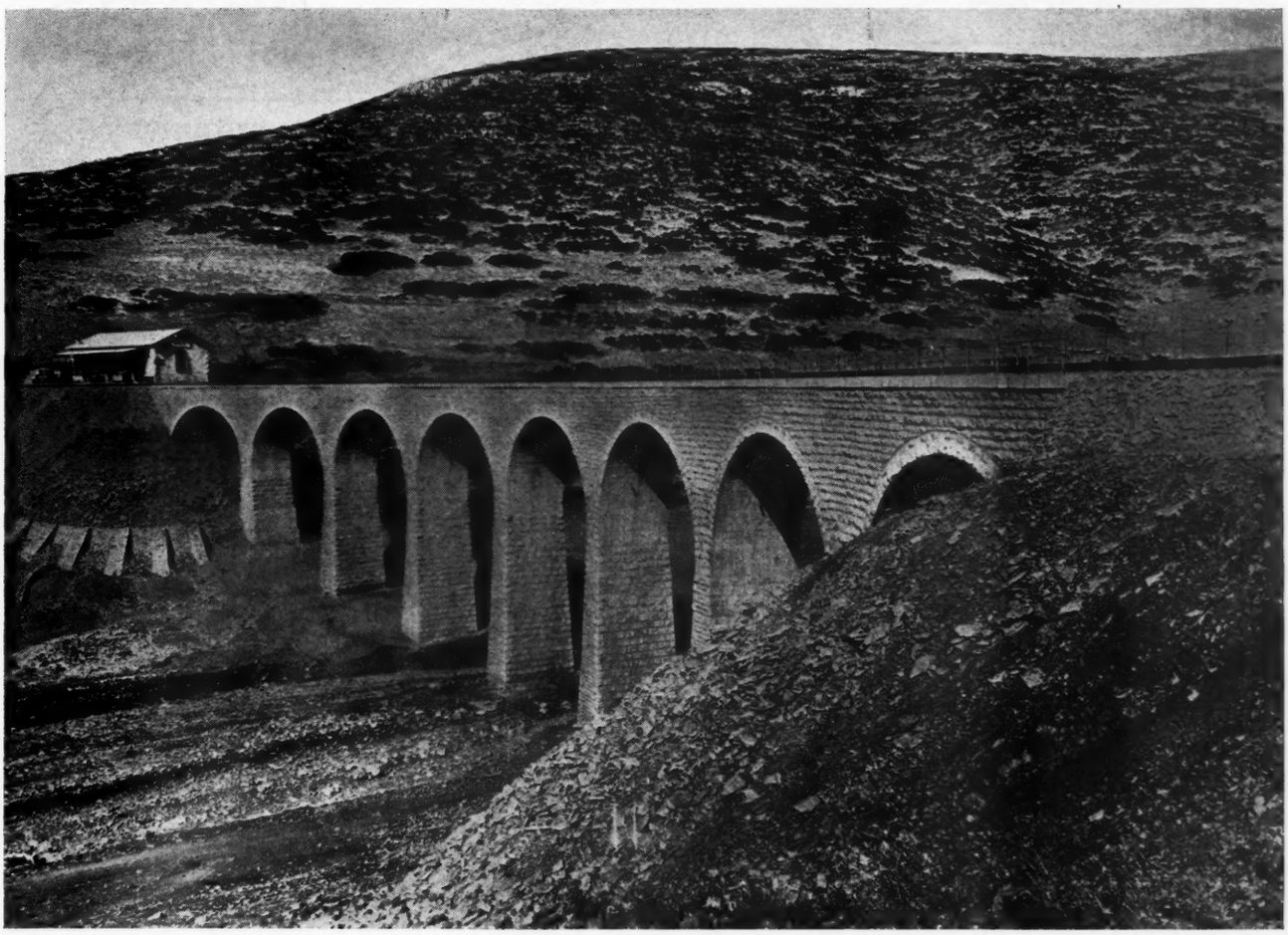
NO. 114 OF A SERIES OF FAMOUS ARCHES OF THE WORLD



CALAMATA VIADUCT

GREECE

This viaduct, which is situated between Corinth and Athens on the Piraeus, Athens & Peloponnesus Railway in Southern Greece, was constructed in 1897. This single track, masonry construction is 401 ft. in length and consists of eight principal arches of 41 ft. span each which cross the valley at a rail level height of 66 ft. This viaduct is constructed on a curve 459 ft. radius and carries a heavy passenger and freight traffic, serving an important fruit-growing area.

* * * * *

For 31 years the Security Sectional Arch has been serving the American Railroads. From its introduction, up to the present day, American Arch Company Engineers have continuously improved the Arch, until today it is the standard on American Railroads. But a Security Sectional Arch is not enough. To realize its true efficiency, *every brick must be in place.*

There's More to SECURITY ARCHES *Than Just Brick*

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

AMERICAN ARCH CO.
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60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

Financial

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $4,750,000 of 2½ per cent serial equipment trust certificates, maturing in 10 equal annual installments of $475,000 on March 1, in each of the years from 1941 to 1950, inclusive. The issue has been sold at 103.-0391 to a group composed of Harriman Ripley & Co., Inc., Blyth & Co., Inc., and Alexander Brown & Sons, making the average annual cost to the company approximately 1.893 per cent.

CHICAGO UNION STATION.—*Hearing on Bond and Note Issue.*—Division 4 of the Interstate Commerce Commission has called a public hearing for March 23 before Examiner A. C. Devoe on the application of this company to issue and sell $16,000,-000 of 3⅛ per cent first mortgage bonds and $600,000 of 2½ per cent guaranteed notes to provide funds for the retirement of $16,000,000 of four per cent first mortgage bonds. The company offered the bonds at competitive bidding and received only one bid, that of Halsey, Stuart & Co., which it considered unsatisfactory. Later, the issue was sold to a group of investment bankers headed by Kuhn, Loeb & Co., of New York City.

At a press conference on March 14, Jesse Jones, Federal Loan Administrator, in commenting on the below-par bid of Halsey, Stuart & Co., said that the terminal company should have received "at least par" in the present bond market. He went on to say that the Reconstruction Finance Corporation would be glad to buy the bonds if the company could not get a satisfactory price for them, but pointed out that the R. F. C. does not make it a practice to enter into competitive bidding.

Asked what he thought of competitive bidding and the reluctance of certain bankers to enter into it, Mr. Jones said he believed it was a good practice in certain cases and not so good in others. Sometimes, he observed, the issue of securities is too large to be offered at competitive bidding and must be sold through negotiation with a group or syndicate of banking houses.

ERIE—*Reorganization.*—Winthrop Waite, Harry Weinstein, and Cameron Blaikie, Jr., have been authorized by Division 4 of the Interstate Commerce Commission to serve as a protective committee for holders of the common stock of the Northern of New Jersey, as creditors of the Erie in reorganization proceedings under section 77 of the Bankruptcy Act, and to solicit authorizations to represent such stockholders, without the deposit of the stock.

GULF, MOBILE & OHIO.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to (1) acquire control of the Gulf Transport Company, the Mobile & Ohio Transportation Company, and the Mobile & Ohio Transportation Company of Illinois through the ownership of stock and (2) purchase of motor carrier properties of the Mobile & Ohio, one of the companies which, together with the Gulf, Mobile & Northern, is being amalgamated to form the Gulf, Mobile & Ohio.

ILLINOIS TERMINAL.—*Acquisition.*—This company has asked the Interstate Commerce Commission for authority to purchase for $200,000 in cash the properties now controlled and operated by it under lease from the St. Louis & Alton and the St. Louis & Belleville Electric. The company would purchase all the railroad properties of the St. Louis & Alton including 14.6 miles of main line from Madison, Ill., to Wood River, and a total of about 15.1 miles of abandoned right of way without tracks, located partly in Madison and partly in St. Clair counties, Illinois, and the O'Fallon freight line of the St. Louis & Belleville Electric, consisting of 3.6 miles of industrial track and approximately 2.4 miles of abandoned right of way in St. Clair county, Ill.

LOUISIANA & ARKANSAS.—*Equipment Trust Certificates and R. F. C. Financing.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $1.-500,000 of three per cent equipment trust certificates, maturing in semi-annual installments of $50,000 each on March 1 and September 1, from September 1, 1940, to March 1, 1955, inclusive. At the same time Division 4 approved the purchase of the issue at par and accrued interest by the Reconstruction Finance Corporation for its own account.

Commissioner Porter filed a short dissent stating that, as in other cases of this type where there is "no substantial initial payment," he was unable to agree to the approval of the R. F. C. financing.

MINNEAPOLIS & ST. LOUIS.—*Abandonment.*—This company has been denied authority by Division 4 of the Interstate Commerce Commission to abandon a line extending from Aberdeen, S. Dak., to Leola, 29.6 miles. Division 4 found that the public need for the branch is sufficient to warrant its retention. "It is apparent," states the decision, "that the branch could be operated for several years without any unusual expenditures for maintenance and that rehabilitation to the extent contemplated by the applicant would be unwarranted in view of the potential traffic of the tributary territory."

SEABOARD AIR LINE.—*Abandonment by the Chesterfield & Lancaster.*—The Chesterfield & Lancaster has asked the Interstate Commerce Commission for authority to abandon a line extending from Cheraw, S. C., to Pageland, 31.8 miles.

Average Prices of Stocks and Bonds

	Mar. 19	Last week	Last year
Average price of 20 representative railway stocks..	31.02	31.53	30.68
Average price of 20 representative railway bonds..	58.73	59.19	62.26

Dividends Declared

Pittsburgh, Bessemer & Lake Erie.—6 Per Cent Preferred, $1.50, semi-annually, payable June 1 to holders of record May 15.

Providence & Worcester.—$1.50, payable April 3 to holders of record March 13.

Railway Officers

EXECUTIVE

C. V. Berglund, whose promotion to assistant to the vice-president of operation and maintenance of the Northern Pacific, with headquarters at St. Paul, Minn., was

C. V. Berglund

announced in the *Railway Age* of March 16, was born at Minneapolis, Minn., on April 4, 1889, and attended business college for two years. He entered railway service on June 3, 1909, in the office of the division superintendent at Minneapolis and on March 1, 1920, he was appointed statistician and staff assistant in the vice-president's office in St. Paul. Mr. Berglund was appointed trainmaster at Livingston, Mont., on August 15, 1927, and was later transferred successively to Staples, Minn., and Dickinson, N. D. On June 1, 1936, he was appointed assistant to the general manager, with headquarters at Seattle, Wash., the position he held until his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

Jose Ramirez Gamez, assistant to the general auditor of the National Railways of Mexico, has been promoted to general auditor, with headquarters as before at Mexico, D. F., succeeding **Guillermo Lopez Espino,** who has been appointed assistant general auditor.

OPERATING

Juan C. Garcia, division superintendent on the National Railways of Mexico, has been promoted to general superintendent, with headquarters as before at Mexico, D. F., succeeding **David S. Alonzo,** who has retired because of illness.

E. C. Harper, assistant trainmaster on the Illinois Central at Chicago, has been promoted to trainmaster, with headquarters at Carbondale, Ill., succeeding to a portion of the territory under the jurisdiction of **C. Wall.** Mr. Wall continues as

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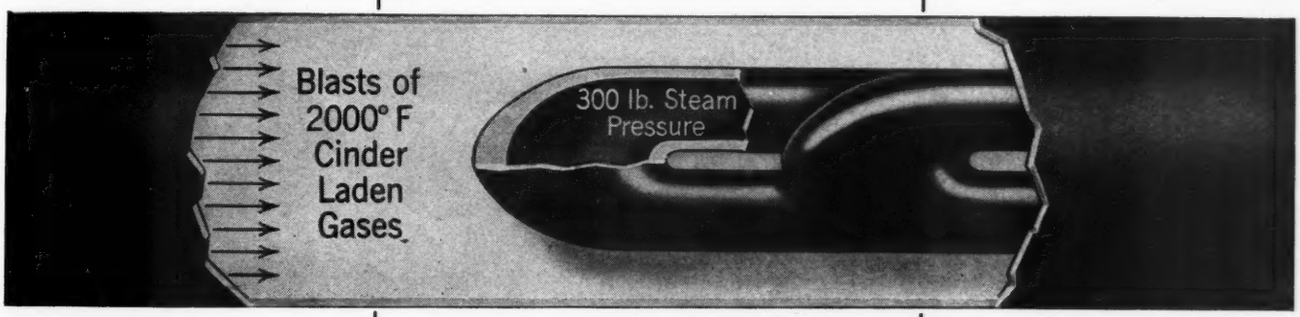
Pressures and Temperatures



Take Their Toll

Present day operating conditions place a heavy burden on superheater units. They are subjected to firebox and flue temperatures up to 2,000 deg. F., accompanied by blasts of burning cinders; internal steam pressures are as high as 300 lb. with damaging effect on the steam areas from scale.

When locomotives are shopped for heavy repairs be sure that the superheater units get equal attention . . . it is wise to renew them in time.

ELESCO

A-1396

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trainmaster, at Carbondale, with jurisdiction over the Centralia district, Branch Junction, Ill., to Ballard, and the Mound City branch.

W. J. Wiltse, assistant trainmaster, Philadelphia division, of the Pennsylvania, has been appointed freight trainmaster of the Long Island. **H. L. Kimbel,** yardmaster of the Philadelphia division, has been appointed assistant trainmaster of the Philadelphia division.

TRAFFIC

J. R. Scott, commercial agent for the Kansas City Southern and the Louisiana & Arkansas at Fort Worth, Tex., has been promoted to general agent at Seattle, Wash., succeeding **Paul C. Brown,** who has been transferred to San Francisco, Cal. Mr. Brown replaces **J. F. Griffitts,** deceased. **S. O. Grubb, Jr.,** commercial agent at Monroe, La., has been promoted to general agent at Jackson, Miss., a newly created position.

Robert G. Merrick, assistant freight traffic manager on the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan., will retire on March 31. Mr. Merrick was born at Manteno, Ill., on March 13, 1870, and entered railway service in January, 1887, as a tariff clerk in the general freight office at Topeka. On July 17, 1904, he was promoted to division freight agent at that point, and on January 1, 1907, he was advanced to assistant general freight agent. He was further advanced to general freight agent, with headquarters at Topeka, on March 1, 1920, and on October 1, 1927, he was promoted to assistant freight traffic manager, from which position he will retire on March 31.

ENGINEERING AND SIGNALING

H. J. Kerstetter, assistant division engineer of the Pittsburgh division of the Pennsylvania, has been appointed division engineer of the Middle division, succeeding **R. H. Crew** who has been appointed engineer of maintenance of way of the Eastern Ohio division.

Earl Miller, signal supervisor on the New York, Chicago & St. Louis (Nickel Plate) at Frankfort, Ind., has been promoted to superintendent of telegraph and signals, with headquarters at Cleveland, Ohio, succeeding **J. H. Oppelt,** whose death on February 22, was announced in the *Railway Age* of March 2. **A. L. Shepard,** signal office engineer, has been appointed assistant signal superintendent, with headquarters as before at Cleveland, and the position of signal office engineer has been abolished. Mr. Miller entered the service of the Nickel Plate in April, 1913, as a signal helper and later was promoted successively to signal maintainer, maintenance foreman and general foreman. In August, 1935, he was appointed signal supervisor at Frankfort in charge of all field work on the Lake Erie & Western and the Clover Leaf districts.

C. H. Hardwick, whose promotion to district maintenance engineer on the Chicago, Rock Island & Pacific, with headquarters at El Reno, Okla., was announced in the *Railway Age* of February 3, was born at Atlantic, Iowa, on February 9, 1902, and attended Iowa State College in 1919, 1920 and 1921. He entered railway service on June 9, 1917, as a section laborer on the Rock Island at Atlantic and served in this capacity during summer vacations for four consecutive years. After attending Iowa State College, he entered other employment but returned to the Rock Island in 1929 as a section foreman, later serving as an extra gang and construction foreman. In 1932, Mr. Hardwick was promoted to track supervisor, with headquarters at Manly, Iowa, but in 1932, because of a reduction in force, he returned to the position of section foreman on the Iowa division. In 1934, he was appointed a steel gang foreman and later served as an assistant roadmaster in charge of one of the system rail laying gangs. In October, 1936, he was advanced to roadmaster at Peoria, Ill., two months later being transferred to Iowa City, Iowa. Mr. Hardwick was transferred to Fairbury, Neb., in April, 1937, and to El Reno, Okla., in October, 1937. He was located at the latter point at the time of his promotion, which was effective February 1.

MECHANICAL

John S. Morris, whose appointment as electrical engineer of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio, was announced in the *Railway Age* of March 9, was born February 11, 1892, at Denison, Texas. He was a graduate in mechanical and electrical engineering from Cornell University in 1917. In June of that year he entered railroad service on the New York, Chicago & St. Louis as a special apprentice. Two years later he became assistant engineer. From 1923 to 1933 he served this road successively as engineer of shops and machinery, general foreman and mechanical inspector. For three years following he worked as master mechanic on the Chicago Great Western, rejoining the New York, Chicago & St. Louis in 1936 as mechanical assistant, which position he held at the time of his recent appointment.

OBITUARY

H. H. Ramsey, auditor of the Peoria & Eastern with headquarters at Indianapolis, Ind., died on March 13.

Charles C. Trueb, assistant general passenger agent of the Pennsylvania, with headquarters at New York, died at his home in East Orange, N. J., on March 16, at the age of 61.

T. E. McDonnell, president of the Canadian Pacific Express Company, whose death was announced in the *Railway Age* of March 2, was born on May 26, 1872, at Chicago. He attended Parish schools in Chicago, and began his career on June 1, 1887, as a wagon boy with the United States Express Company. He remained with this company until August 1, 1910, when as general superintendent, he left to take charge of the Western Express Company. In 1918 he became vice-president and general manager of the Canadian Pacific Express Company, becoming president

T. E. McDonnell

and general manager in 1928. In 1937 Mr. McDonnell appointed J. E. Coulter to succeed him as general manager, continuing to serve as president of the company until his death.

Walter J. Donally, division superintendent of the Canadian National, with headquarters at Winnipeg, Man., whose death was announced in the *Railway Age* of March 16, was born on January 3, 1886, at Mattawa, Ont. He attended Kent school and Success Business College in Ottawa, Ont., entering railroad service in 1904 as a brakeman on the Canadian Pacific. He held this position until 1907, when he became brakeman on the Canadian National, in which capacity he remained until 1914 when he became conductor. From 1915 to 1923 Mr. Donally was employed as yardmaster, and from 1923 to 1924 as general yardmaster. In 1924 he became inspector of transportation and in 1927 he again served as general yardmaster, later becoming assistant superintendent. Mr. Donally was appointed division superintendent in 1930, the position he held at the time of his death.

Robert H. McCullough, who retired in 1936 as trainmaster on the Missouri Pacific at St. Louis, Mo., died of a heart ailment at his home in that city on March 16.

J. C. Irwin, president of the American Railway Engineering Association in 1937 and 1938, who retired as valuation engineer of the Boston & Albany, with headquarters at Boston, Mass., on September 30, 1938, died in that city on March 20, after an illness of several weeks.

William P. Howard, who retired on August 1, 1929, as superintendent of the Owensboro and Nashville division of the Louisville & Nashville, with headquarters at Russellville, Ky., died on February 14. Mr. Howard was born in Townsend, Vt., on December 11, 1861, and entered railway service on January 1, 1876, as a station agent apprentice on the L. & N. at Gallatin, Tenn., later becoming a telegrapher, dispatcher, chief dispatcher, trainmaster and superintendent.